

August 20, 2003

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Set	Items	Description
S1	2247871	TELEPRESENCE? OR (VIRTUAL? OR ARTIFICIAL OR AUGMENT?) (ENGINEERING OR ENVIRONMENT? OR TOOL? OR WORLD?) OR VIR OR VR OR VRML OR AR OR SIMULATOR OR SIMULATION OR CAVE OR STEREOSCOP? OR TELEROBOT? OR UT
S2	1373475	INTERNET? OR INTRANET? OR EXTRANET? OR WEB OR WEBSITE? OR WEBPAGE? OR NET OR PORTAL? OR CYBERSPACE?
S3	3406089	TELEOPERAT? OR OPERATOR? OR USER? OR PATRON? OR M?N OR WOM?N OR ENDUSER? OR CLIENT?
S4	19983	HEADSET? OR HEAD()MOUNTED()DISPLAY OR HMD OR HEAD() (SET? OR TRACK?) OR HELMET?
S5	9747289	CONTROL? OR MANIPULAT? OR GOVERN? OR MASTER? OR COMMAND? OR AUTHORITY OR DOMINAT? OR RULE? OR REIGN? OR HANDL?
S6	8168379	MOVE? OR MOVING OR ACTIV? OR 6DOF OR 3DOF OR (SIX OR 6 OR - THREE OR 3) (DEGREES()OF()FREEDOM OR ROTAT? OR MANEUVER?
S7	1037229	ELSEWHERE OR ELSE()WHERE OR REMOTE OR APART OR DISTANT OR - FAR()OFF OR FAR()AWAY OR OFF()LYING OR OFF()SITE? OR OFFSITE? OR OUT()LYING OR REMOVED OR (ANOTHER OR OTHER OR DIFFERENT) (2-W) (LOCATION? OR SITE? OR PLACE?) OR OUTLYING
S8	35	S1 AND S2 AND S3 AND S4
S9	9	S8 AND S7
S10	5	RD (unique items)
S11	135684	S3(5N)S5
S12	131	S11 AND S4 AND S1
S13	6	S12 AND S2
S14	4	S13 NOT S10
S15	3	RD (unique items)
S16	199205	BROADCAST?
S17	668	S16(5N)S7
S18	5	S17 AND S1 AND S3
S19	2	S18 AND S5
S20	2	RD (unique items)
S21	2	S19 NOT (S10 OR S14)
S22	5	S1 AND S2 AND S4 AND S6 AND S7

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S23	2	RD (unique items)
S24	0	S23 NOT (S21 OR S10 OR S14)
S25	232970	S5(3N)S6
S26	302	S25 AND S2 AND S1
S27	0	S26 AND S4
S28	86	S26 AND S3
S29	77	RD (unique items)
S30	55	S29 AND PY=1998:2003
S31	22	S29 NOT S30
S32	22	S31 NOT (S21 OR S10 OR S14)
S33	0	S8 AND S16
S34	56	S1 AND S2 AND S4
S35	35	S34 AND S8
S36	30	RD (unique items)
S37	24	S36 NOT (S21 OR S10 OR S14)
S38	65	AU=(MAGUIRE, F? OR MAGUIRE F?)
S39	0	S38 AND S1

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9/3,K/1 (Item 1 from file: 8)  
DIALOG(R)File 8: Ei Compendex(R)  
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05579776 E.I. No: EIP00065196757

**Title: Case study: Web enabled Virtual Reality Robotics Training System**  
**Author:** Teh, Tuan Ann; Goh, Yuan Sheng Victor  
**Corporate Source:** Temasek Polytechnic, Singapore, Singapore  
**Conference Title:** Industrial Virtual Reality: Manufacturing and Design Tool for the next Millennium - 1999 (The ASME International Mechanical Engineering Congress and Exposition)  
**Conference Location:** Nashville, TN, USA **Conference Date:** 19991101-19991102  
**E.I. Conference No.:** 56871  
**Source:** American Society of Mechanical Engineers, Material Handling Division, MHD v 5 1999. p 139-146  
**Publication Year:** 1999  
**CODEN:** MHDEEA  
**Language:** English

**Title: Case study: Web enabled Virtual Reality Robotics Training System**  
**Abstract:** Virtual Reality Robotics Training System is the use of desk-top Virtual Reality ( VR ) system for preparing a **user** to operate on a real robotics system. The computer system presents the **user** with a view of a virtual robotics system. The **virtual world** replicates actions of the actual robotics system. The view will be a 3D scene and a **user** can immerse in this **virtual world** by wearing a **Head Mounted Display** . As the **user** of system, he can move around a virtual robotics system through the use of foot...

...sound normally heard in the operation of the actual system is replicated so that the **user** would be able to tell both visually as well as aurally if the actions are correct. With **Internet** fast moving towards full 3D multimedia, interactive platform, it is possible to link the **virtual world** to the real physical system and place the **virtual world** on the **Internet** so that **user** can control, operate, and manipulate the physical system remotely. This paper investigates the possibility of...

...the training system could be remotely operated using Virtual Reality technology through a platform independent, **Internet** enabled graphical **user** interface with real time video feedback. Possible applications of this case study include tele-control of robot in hazardous environments, **remote** diagnosis of manufacturing systems, tele-manufacturing and high value-added training. (Author abstract) 8 Refs.

**Descriptors:** Virtual reality; Computer integrated manufacturing; Robot programming; World Wide **Web** ; Human computer interaction; Graphical **user** interfaces; Robotics; Multimedia systems; Interactive computer systems; **Remote control**

9/3,K/2 (Item 2 from file: 8)  
DIALOG(R)File 8: Ei Compendex(R)  
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05225983 E.I. No: EIP99020003081

**Title: DIGIMUSE: An interactive telerobotic system for remote viewing of three-dimensional art objects**  
**Author:** Goldberg, Steven B.; Bekey, George A.; Akatsuka, Yuichiro; Bressanelli, Mirco  
**Corporate Source:** Univ of Southern California, Los Angeles, CA, USA  
**Conference Title:** Proceedings of the 1998 Conference on Telem manipulator and Telepresence Technologies V  
**Conference Location:** Boston, MA, USA **Conference Date:** 19981104-19981105  
**E.I. Conference No.:** 49730

August 20, 2003

Source: Proceedings of SPIE - The International Society for Optical Engineering v 3524 1998. SPIE, Bellingham, WA, USA. p 196-200  
Publication Year: 1998  
CODEN: PSISDG ISSN: 0277-786X  
Language: English

**Title: DIGIMUSE: An interactive telerobotic system for remote viewing of three-dimensional art objects**

...Abstract: project with the Fisher Art Gallery at USC, we have constructed a tele-operated robotic **Web** site that allows for **remote** positioning and binocular viewing of statues and other non-planar art objects. This system has been designed to provide interactive **remote** access to three-dimensional art objects in real time, so that anyone with a **Web** connection and a **head mounted display (HMD)** can view and study binocular images of art objects anywhere in the world. A pair...

...can be commanded to one of 12 positions. The robot is controlled via a graphical, **user** friendly interface written in Java, which allows the **user** to position the cameras anywhere in the allowed workspace of the robot. Once the positions...

...are established, the system takes two pictures of the statue and returns them to the **user**, while simultaneously composing a stereo image suitable for viewing with an **HMD**. The paper describes the hardware and software architecture of the system and its major features...

Descriptors: Robotics; **Remote** control; Interactive computer systems; Graphical **user** interfaces; Interactive computer graphics; World Wide **Web**; Real time systems; Display devices; Binocular vision; Video cameras  
Identifiers: **Telerobotics**; Head mounted displays (**HMD**)

9/3,K/3 (Item 3 from file: 8)  
DIALOG(R)File 8: Ei Compendex(R)  
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04173519 E.I. No: EIP95032645092

**Title: From Antarctica to space: use of telepresence and virtual reality in control of a remote underwater vehicle**

Author: Stoker, Carol R.

Corporate Source: NASA Ames Research Cent., Moffett Field, CA, USA

Conference Title: Mobile Robots IX

Conference Location: Boston, MA, USA Conference Date: 19941102-19941104

E.I. Conference No.: 22159

Source: Proceedings of SPIE - The International Society for Optical Engineering v 2352 1995. Society of Photo-Optical Instrumentation Engineers, Bellingham, WA, USA. p 288-299

Publication Year: 1995

CODEN: PSISDG ISSN: 0277-786X ISBN: 0-8194-1687-8

Language: English

**Title: From Antarctica to space: use of telepresence and virtual reality in control of a remote underwater vehicle**

Abstract: We describe an experiment which simulated many aspects of control of a **remote** vehicle on another planetary surface. We have developed a **Telepresence** -controlled Remotely Operated Underwater Vehicle (TROV) and used it to perform scientific exploration in an...

...covered marine environment near McMurdo Station, Antarctica. The goal of the mission was to use **telepresence** and virtual reality technology to operate a **remote** vehicle to perform a scientific study of the marine environment under the sea ice in...

...of the vehicle was accomplished using a control box containing joysticks and switches, with the **operator** viewing stereo video camera images on a stereo display monitor. **Remote** control of the vehicle over the satellite link used either a stereo display monitor similar to that used locally, or

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a stereo head-mounted head - tracked display. The remote operators could also view a computer-generated graphic representation of the underwater terrain, modeled from the vehicle's sensors. The actual vehicle was driven either from within the virtual environment or by watching stereo video. Satellite communication was used to transmit stereo video from the TROV to NASA Ames and to provide a bi-directional Internet link to the TROV control computer for command and telemetry signals. All vehicle functions could...

...the satellite link. The TROV was operated in Antarctica nearly continuously using both local and remote control for 7 weeks. The results of our experiments suggest that surface rovers using control technology with real time telepresence could vastly expand the range of human exploration from a human base on the Moon...

...The use of virtual reality in the control interface will significantly improve the capabilities of remote rovers controlled from Earth. 18 Refs.

Descriptors: Vehicles; Underwater equipment; Mobile robots; Remote control; Virtual reality; Satellite links

Identifiers: Telepresence ; Remotely operated underwater vehicle; Antarctica; Control interface

9/3,K/4 (Item 1 from file: 2)

DIALOG(R)File 2:INSPEC

(c) 2003 Institution of Electrical Engineers. All rts. reserv.

6831321 INSPEC Abstract Number: C2001-03-0110-002

Title: A case study: Web enabled virtual reality robotics training system

Author(s): Teh Tuan Ann; Goh Yuan Sheng Victor

Author Affiliation: Sch. of Eng., Temasek Polytech., Singapore

Conference Title: Industrial Virtual Reality: Manufacturing and Design Tool for the Next Millennium. NIST-ASME Industrial Virtual Reality Symposium. Symposium on Virtual Environment for Manufacturing p.139-46

Editor(s): Banerjee, P.; Kesavadas, T.

Publisher: ASME, New York, NY, USA

Publication Date: 1999 Country of Publication: USA vi+219 pp.

ISBN: 0 7918 1636 2 Material Identity Number: XX-1999-03407

Conference Title: Proceedings of Industrial Virtual Reality Symposium

Conference Sponsor: ASME

Conference Date: 1-2 Nov. 1999 Conference Location: Chicago, IL, USA

Language: English

Subfile: C

Copyright 2001, IEE

Title: A case study: Web enabled virtual reality robotics training system

Abstract: A virtual reality robotics training system uses a desktop virtual reality (VR) system for preparing a user to operate on a real robotics system. The computer system presents the user with a view of a virtual robotics system. The virtual world replicates the actions of the actual robotics system. The view is a 3D scene and a user can immerse himself in this virtual world by wearing a head-mounted display. The user can move around the virtual robotics system through the use of foot switches, go to...

...sound normally heard in the operation of the actual system is replicated so that the user can tell if his actions are correct. With the Internet rapidly moving towards a full 3D multimedia interactive platform, it is possible to link the virtual world to the real physical system and place the virtual world on the Internet so that the user can control, operate and manipulate the physical system remotely. This paper investigates the possibility of...

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... the training system could be remotely operated using virtual reality technology through a platform-independent, **Internet** -enabled GUI with real-time video feedback. Possible applications include telecontrol of robots in hazardous environments, **remote** diagnosis of manufacturing systems, telemanufacturing and value-added training.

...Descriptors: graphical **user** interfaces...

... **helmet** mounted displays...

... **Internet** ; ...

... **telerobotics** ;

...Identifiers: World Wide **Web** -enabled system...

...immersive **virtual** **world** ; ...

... **head** - **mounted** **display** ; ...

...platform-independent **Internet** -enabled GUI...

... **remote** control...

... **remote** diagnosis

9/3,K/5 (Item 2 from file: 2)

DIALOG(R)File 2:INSPEC

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6825735 INSPEC Abstract Number: B2001-03-6210P-001

**Title: Developing a distributed meeting service to support mobile meeting participants**

Author(s): Hickey, S.

Author Affiliation: Dept. of Inf. Process. Sci., Oulu Univ., Finland

Conference Title: Intelligence in Networks. IFIP TC6 WG6.7 Fifth International Conference on Intelligence in Networks (SMARTNET '99) p. 81-94

Editor(s): Yongchareon, T.; Aagesen, F.A.; Wuwongse, V.

Publisher: Kluwer Academic Publishers, Norwell, MA, USA

Publication Date: 2000 Country of Publication: USA xii+460 pp.

ISBN: 0 7923-8691 4 Material Identity Number: XX-1999-03301

Conference Title: Proceedings of 5th IFIP Conference on Intelligence in Networks

Conference Sponsor: Alcatel; Ericsson Commun.; Lucent Technol.; Nokia Telecommun.; Siemens Syst.; et al

Conference Date: 22-26 Nov. 1999 Conference Location: Pathumthani, Thailand

Language: English

Subfile: B

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...Abstract: The success of these new systems will partly be based on the data services provided. **Apart** from supporting traditional data (E-mail, FTP, etc.) and multimedia applications (videoconferencing, **Web** access, etc.), the combination of mobility and high-speed data terminals will lead to innovative...

... navigation. In the PAULA project we are implementing an experimental distributed meeting service, based on **telepresence**. The service attempts to compensate for the 'in-transit' state of a mobile **user** by enabling them to attend a **remote** meeting while providing a high level of immersion, or sense of presence, at the meeting...

... camera placed in the meeting room that provides a constant navigable video stream to a **remote** mobile participant utilising a **head - mounted display**.

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...Identifiers: Web access...

... telepresence ; ...

... remote meeting...

... head - mounted display

9/3,K/6 (Item 3 from file: 2)

DIALOG(R)File 2:INSPEC

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6296497 INSPEC Abstract Number: C1999-08-3390T-018

Title: DIGIMUSE: an interactive telerobotic system for remote viewing of three-dimensional art objects

Author(s): Goldberg, S.B.; Bekey, G.A.; Akatsuka, Y.; Bressanelli, M.

Author Affiliation: Dept. of Comput. Sci., Univ. of Southern California, Los Angeles, CA, USA

Journal: Proceedings of the SPIE - The International Society for Optical Engineering Conference Title: Proc. SPIE - Int. Soc. Opt. Eng. (USA)

vol.3524 p.196-200

Publisher: SPIE-Int. Soc. Opt. Eng,

Publication Date: 1998 Country of Publication: USA

CODEN: PSISDG ISSN: 0277-786X

SICI: 0277-786X(1998)3524L:196:DITS;1-T

Material Identity Number: C574-1999-065

U.S. Copyright Clearance Center Code: 0277-786X/98/\$10.00

Conference Title: Telemanipulator and Telepresence Technologies V

Conference Sponsor: SPIE

Conference Date: 4-5 Nov. 1998 Conference Location: Boston, MA, USA

Language: English

Subfile: C

Copyright 1999, IEE

Title: DIGIMUSE: an interactive telerobotic system for remote viewing of three-dimensional art objects

...Abstract: of a joint project with the Fisher Art Gallery at USC, we have constructed a teleoperated robotic Web site that allows for remote positioning and binocular viewing of statues and other non-planar art objects. This system has been designed to provide interactive remote access to 3D art objects in real time, so that anyone with a Web connection and a head mounted display (HMD) can view and study binocular images of art objects anywhere in the world. A pair...

... of art from any desired position and orientation. The robotic is controlled via a graphical user interface written in Java. Once the positions of the cameras are established, the system takes two pictures of the statue and returns them to the user, while simultaneously composing a stereo image suitable for viewing with an HMD. The paper describes the hardware and software architecture of the system and its major features.

...Descriptors: graphical user interfaces...

... remote sensing...

... telerobotics ;

...Identifiers: telerobotics ; ...

... remote viewing...

... Web site...

...graphical user interface

9/3,K/7 (Item 4 from file: 2)

DIALOG(R)File 2:INSPEC

August 20, 2003

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5147172 INSPEC Abstract Number: B9602-7710D-007, C9602-3360J-002

**Title: From Antarctica to space: use of telepresence and virtual reality in control of a remote underwater vehicle**

Author(s): Stoker, C.

Author Affiliation: Space Sci. Div., NASA Ames Res. Center, Moffett Field, CA, USA

Journal: Proceedings of the SPIE - The International Society for Optical Engineering Conference Title: Proc. SPIE - Int. Soc. Opt. Eng. (USA) vol.2352 p.288-99

Publisher: SPIE-Int. Soc. Opt. Eng,

Publication Date: 1995 Country of Publication: USA

CODEN: PSISDG ISSN: 0277-786X

SICI: 0277-786X(1995)2352L:288:FAST;1-W

Material Identity Number: C574-95054

U.S. Copyright Clearance Center Code: 0 8194 1687 8/95/\$6.00

Conference Title: Mobile Robots IX

Conference Sponsor: SPIE

Conference Date: 2-4 Nov. 1994 Conference Location: Boston, MA, USA

Language: English

Subfile: B C

Copyright 1996, IEE

**Title: From Antarctica to space: use of telepresence and virtual reality in control of a remote underwater vehicle**

Abstract: Describes an experiment which simulated many aspects of control of a **remote** vehicle on another planetary surface. The author has developed a **telepresence** -controlled remotely operated underwater vehicle (TROV) and used it to perform scientific exploration in an...

...covered marine environment near McMurdo Station, Antarctica. The goal of the mission was to use **telepresence** and virtual reality technology to operate a **remote** vehicle to perform a scientific study of the marine environment under the sea ice in...

...of the vehicle was accomplished using a control box containing joysticks and switches, with the **operator** viewing stereo video camera images on a stereo display monitor. **Remote** control of the vehicle over the satellite link used either a stereo display monitor similar to that used locally, or a stereo head-mounted **head - tracked** display. The **remote operators** could also view a computer-generated graphic representation of the underwater terrain, modeled from the vehicle's sensors. The actual vehicle was driven either from within the **virtual environment** or by watching stereo video. Satellite communication was used to transmit stereo video from the TROV to NASA Ames and to provide a bi-directional **Internet** link to the TROV control computer for command and telemetry signals. All vehicle functions could...

... the satellite link, The TROV was operated in Antarctica nearly continuously using both local and **remote** control for 7 weeks. The results of the experiments suggest that surface rovers using control technology with real time **telepresence** could vastly expand the range of human exploration from a human base on the Moon...

... The use of virtual reality in the control interface will significantly improve the capabilities of **remote** rovers controlled from Earth.

...Descriptors: **telerobotics** ;

...Identifiers: **telepresence** ; ...

... **remote** underwater vehicle...

...stereo head-mounted **head - tracked** display...

...bi-directional **Internet** link...



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... remote rovers

9/3,K/8 (Item 1 from file: 6)  
DIALOG(R)File 6:NTIS  
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1849988 NTIS Accession Number: N95-14099/2

**From Antarctica to Space: Use of Telepresence and Virtual Reality in Control of Remote Vehicles**

(Abstract Only)

Stoker, C. ; Hine, B. P. ; Sims, M. ; Rasmussen, D. ; Hontalas, P.

National Aeronautics and Space Administration, Moffett Field, CA. Ames Research Center.

Corp. Source Codes: 019045001; NC473657

Nov 94 1p

Languages: English

Journal Announcement: GRAI9505; STAR3303

In NASA. Goddard Space Flight Center, Eighteenth Space Simulation Conference: Space Mission Success Through Testing p 471.

NTIS Prices: (Order as N95-14062/0, PC A20/MF A04)

**From Antarctica to Space: Use of Telepresence and Virtual Reality in Control of Remote Vehicles**

... in the Antarctic. The goal of the mission was to operationally test the use of **telepresence** and virtual reality technology in the **operator** interface to a **remote** vehicle, while performing a benthic ecology study. The vehicle was operated both locally, from above...

... vehicle was accomplished using the standard Phantom control box containing joysticks and switches, with the **operator** viewing stereo video camera images on a stereo display monitor. **Remote** control of the vehicle over the satellite link was accomplished using the **Virtual Environment Vehicle Interface (VEVI)** control software developed at NASA Ames. The **remote operator** interface included either a stereo display monitor similar to that used locally or a stereo head-mounted **head - tracked** display. The compressed video signal from the vehicle was transmitted to NASA Ames over a 768 Kbps satellite channel. Another channel was used to provide a bi-directional **Internet** link to the vehicle control computer through which the command and telemetry signals traveled, along...

...directional telephone service. In addition to the live stereo video from the satellite link, the **operator** could view a computer-generated graphic representation of the underwater terrain, modeled from the vehicle's sensors. The **virtual environment** contained an animate graphic model of the vehicle which reflected the state of the actual...

...markers, and locations of video snapshots. The actual vehicle was driven either from within the **virtual environment** or through a **telepresence** interface. All vehicle functions could be controlled remotely over the satellite link.

Descriptors: Antarctic regions; \*Communication networks; \* **Man** machine systems; \*Space environment **simulation** ; \* **Teleoperators** ; \*Underwater vehicles; \*Virtual reality; Ocean bottom; Satellite communication; Sea ice; Space exploration; Cameras; Data links; Environmental control; Ground based control; Ice; Integrated mission control center; **Internets** ; McMurdo sound ; **Remote** control; Signal processing; Telemetry; Video compression; Video signals

9/3,K/9 (Item 1 from file: 144)  
DIALOG(R)File 144:Pascal  
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14131110 PASCAL No.: 99-0327259

**DIGIMUSE : An interactive telerobotic system for remote viewing of**

August 20, 2003

**three-dimensional art objects**

**Telemanipulator and telepresence technologies V : Boston MA, 4-5  
November 1998**

GOLDBERG S B; BEKEY G A; AKATSUKA Y; BRESSANELLI M

STEIN Matthew R, ed

Computer Science Department, University of Southern California, Los Angeles, CA 90089-0781, United States; Robotics Laboratory, Mechanical Engineering Department, Polytechnic University of Milan, Milan, Italy

International Society for Optical Engineering, Bellingham WA, United States.

Telemanipulator and telepresence technologies. Conference, 5 (Boston MA USA) 1998-11-04

Journal: SPIE proceedings series, 1998, 3524 196-200

Language: English

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**DIGIMUSE : An interactive telerobotic system for remote viewing of  
three-dimensional art objects**

**Telemanipulator and telepresence technologies V : Boston MA, 4-5  
November 1998**

... project with the Fisher Art Gallery at USC, we have constructed a tele-operated robotic **Web** site that allows for **remote** positioning and binocular viewing of statues and other non-planar art objects. This system has been designed to provide interactive **remote** access to three-dimensional art objects in real time, so that anyone with a **Web** connection and a **head mounted display (HMD)** can view and study binocular images of art objects anywhere in the world. A pair...

... can be commanded to one of 12 positions. The robot is controlled via a graphical, **user** friendly interface written in Java, which allows the **user** to position the cameras anywhere in the allowed workspace of the robot. Once the positions...

...are established, the system takes two pictures of the statue and returns them to the **user**, while simultaneously composing a stereo image suitable for viewing with an **HMD**. The paper describes the hardware and software architecture of the system and its major features.

English Descriptors: **Remote** operation; Robotics; Three dimensional television; **Remote** control; **Web** site; Visualization; Experimental study

French Descriptors: **Teleoperation** ; Robotique; Television 3 dimensions; Telecommande; Site **Web** ; Visualisation; Etude experimentale

Spanish Descriptors: Teleaccion; Robotica; Television 3 dimensiones; Control remoto; Sitio **Web** ; Visualizacion; Estudio experimenta

August 20, 2003

15/3,K/1 (Item 1 from file: 2)

DIALOG(R)File 2:INSPEC

(c) 2003 Institution of Electrical Engineers. All rts. reserv.

6831321 INSPEC Abstract Number: C2001-03-0110-002

Title: A case study: Web enabled virtual reality robotics training system

Author(s): Teh Tuan Ann; Goh Yuan Sheng Victor

Author Affiliation: Sch. of Eng., Temasek Polytech., Singapore

Conference Title: Industrial Virtual Reality: Manufacturing and Design Tool for the Next Millennium. NIST-ASME Industrial Virtual Reality Symposium. Symposium on Virtual Environment for Manufacturing p.139-46

Editor(s): Banerjee, P.; Kesavadas, T.

Publisher: ASME, New York, NY, USA

Publication Date: 1999 Country of Publication: USA vi+219 pp.

ISBN: 0 7918 1636 2 Material Identity Number: XX-1999-03407

Conference Title: Proceedings of Industrial Virtual Reality Symposium

Conference Sponsor: ASME

Conference Date: 1-2 Nov. 1999 Conference Location: Chicago, IL, USA

Language: English

Subfile: C

Copyright 2001, IEE

Title: A case study: Web enabled virtual reality robotics training system

Abstract: A virtual reality robotics training system uses a desktop virtual reality ( VR ) system for preparing a user to operate on a real robotics system. The computer system presents the user with a view of a virtual robotics system. The virtual world replicates the actions of the actual robotics system. The view is a 3D scene and a user can immerse himself in this virtual world by wearing a head - mounted display . The user can move around the virtual robotics system through the use of foot switches...

...is replicated so that the user can tell if his actions are correct. With the Internet rapidly moving towards a full 3D multimedia interactive platform, it is possible to link the virtual world to the real physical system and place the virtual world on the Internet so that the user can control , operate and manipulate the physical system remotely. This paper investigates the possibility of using such a virtual training...

... the training system could be remotely operated using virtual reality technology through a platform-independent, Internet -enabled GUI with real-time video feedback. Possible applications include telecontrol of robots in hazardous...

...Descriptors: helmet mounted displays...

... Internet ; ...

... telerobotics ;

...Identifiers: World Wide Web -enabled system...

...immersive virtual world ; ...

... head - mounted display ; ...

...platform-independent Internet -enabled GUI

15/3,K/2 (Item 2 from file: 2)

DIALOG(R)File 2:INSPEC

(c) 2003 Institution of Electrical Engineers. All rts. reserv.

6296497 INSPEC Abstract Number: C1999-08-3390T-018

August 20, 2003

**Title: DIGIMUSE: an interactive telerobotic system for remote viewing of three-dimensional art objects**

Author(s): Goldberg, S.B.; Bekey, G.A.; Akatsuka, Y.; Bressanelli, M.

Author Affiliation: Dept. of Comput. Sci., Univ. of Southern California, Los Angeles, CA, USA

Journal: Proceedings of the SPIE - The International Society for Optical Engineering Conference Title: Proc. SPIE - Int. Soc. Opt. Eng. (USA) vol.3524 p.196-200

Publisher: SPIE-Int. Soc. Opt. Eng,

Publication Date: 1998 Country of Publication: USA

CODEN: PSISDG ISSN: 0277-786X

SICI: 0277-786X(1998)3524L:196:DITS;1-T

Material Identity Number: C574-1999-065

U.S. Copyright Clearance Center Code: 0277-786X/98/\$10.00

Conference Title: Telemanipulator and Telepresence Technologies V

Conference Sponsor: SPIE

Conference Date: 4-5 Nov. 1998 Conference Location: Boston, MA, USA

Language: English

Subfile: C

Copyright 1999, IEE

**Title: DIGIMUSE: an interactive telerobotic system for remote viewing of three-dimensional art objects**

...Abstract: joint project with the Fisher Art Gallery at USC, we have constructed a teleoperated robotic **Web** site that allows for remote positioning and binocular viewing of statues and other non-planar...

...interactive remote access to 3D art objects in real time, so that anyone with a **Web** connection and a **head mounted display (HMD)** can view and study binocular images of art objects anywhere in the world. A pair...

... to observe the work of art from any desired position and orientation. The robotic is **controlled** via a graphical **user** interface written in Java. Once the positions of the cameras are established, the system takes ...

...them to the user, while simultaneously composing a stereo image suitable for viewing with an **HMD**. The paper describes the hardware and software architecture of the system and its major features.

...Descriptors: **telerobotics** ;

...Identifiers: **telerobotics** ; ...

... **Web** site

15/3,K/3 (Item 1 from file: 94)

DIALOG(R)File 94:JICST-Eplus

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05297821 JICST ACCESSION NUMBER: 02A0814675 FILE SEGMENT: JICST-E

**Clip-interface: A Human Interface for a 3D Workspace with Wearable PC.**

KOJIMA YOSHIYUKI (1); YASUMURO YOSHIHIRO (1); IMURA MASATAKA (1); MANABE YOSHITSUGU (1); CHIHARA KUNIHIRO (1); KURODA TOMOHIRO (2)

(1) Advanced Inst. Sci. and Technol., Nara; (2) Kyoto Univ., Hospital, JPN Nihon Bacharu Riariti Gakkai Ronbunshi(Transactions of the Virtual Reality Society of Japan), 2002, VOL.7,NO.3, PAGE.313-321, FIG.14, TBL.3, REF.17

JOURNAL NUMBER: L3202ABN ISSN NO: 1344-011X

UNIVERSAL DECIMAL CLASSIFICATION: 681.3:621.397.3 681.327.2

681.51:007.51

LANGUAGE: Japanese COUNTRY OF PUBLICATION: Japan

DOCUMENT TYPE: Journal

ARTICLE TYPE: Original paper

MEDIA TYPE: Printed Publication

...ABSTRACT: digital and physical information seamlessly. Utilizing the

August 20, 2003

mobility of the combination of wearable PC and head mounted display ( HMD ), PCs can be useful platforms for the office work. Employing a stereo pair of cameras installed on HMD , PC captures not only what the user sees but also 3D depth information in front of the user. Proposed system allows the user to handle virtual objects including web browsers, digital documents, images, 3D CG models in the same space with his/her own...

...DESCRIPTORS: stereoscopic im

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21/3,K/1 (Item 1 from file: 8)  
DIALOG(R)File 8:EI Compendex(R)  
(c) 2003 Elsevier Eng. Info. Inc. All rts. reserv.

03957790 E.I. No: EIP94101423974

Title: Efficient load information management for load sharing in distributed systems

Author: Mahamuni, Atul B.; Gonsalves, Timothy A.; Ramamurthi, Bhaskar  
Corporate Source: Wipro Information Technology, Ltd, Bangalore, India  
Conference Title: Proceedings of the IFIP TC6 Working Conference on Computer Networks, Architecture and Applications, NETWORKS'92  
Conference Location: Trivandrum, India Conference Date: 19921028-19921029

E.I. Conference No.: 20935

Source: IFIP Transactions C: Communication Systems n C-13 1993. p 43-54

Publication Year: 1993

CODEN: ITCCE5 ISSN: 0926-549X ISBN: 0-444-89968-5

Language: English

...Abstract: Predicting LIM (PLIM), exploits temporal correlation between load values to predict the loads at the remote nodes. Hence, the broadcast period can be substantially increased. We study the performance of these LIMs using an analytic model and stochastic and trace-driven simulation. (Author abstract) 12 Refs.

...Descriptors: computer systems; Information management; Computer networks; Performance; Storage allocation (computer); Correlation theory; Mathematical models; Stochastic control systems; Computer simulation; User interfaces

Identifiers: Load information management; Load sharing; Periodic broadcast; Probing on demand; Trace driven simulation

21/3,K/2 (Item 2 from file: 8)  
DIALOG(R)File 8:EI Compendex(R)  
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03382666 E.I. Monthly No: EIM9202-007061

Title: Tools for the validation of EUROCRYPT conditional access functions.

Author: Heon, Jean-Pierre  
Corporate Source: CCETT, Fr  
Conference Title: Fourth International Conference on Television Measurements

Conference Location: Montreux, Switz Conference Date: 19910620

E.I. Conference No.: 15099

Source: IEE Conference Publication n 335. Publ by IEE, Michael Faraday House, Stevenage, Engl. p 111-113

Publication Year: 1991

CODEN: IECPB4 ISSN: 0537-9987

Language: English

...Abstract: the D2 MAC/Packet improved television standard (1) and the EUROCRYPT standard (2) for access control. CCETT, one of FRANCE-TELECOM's research centres and responsible for the specification of the...

...French manufacturers to seek CCETT validation of their EUROCRYPT equipment, whether intended for the professional user or the general public. Due to its complex functionalities, the EUROCRYPT part of the VISIOPASS...

Descriptors: TELEVISION SYSTEMS, CABLE; CRYPTOGRAPHY; MODEMS; TELEVISION BROADCASTING; REMOTE CONTROL

Identifiers: TV CONDITIONAL ACCESS SERVICE; EUROCRYPT STANDARD; VISIOPASS SYSTEM; FRANCE-TELECOM; CARD SIMULATOR

August 20, 2003

32/3,K/1 (Item 1 from file: 8)  
DIALOG(R)File 8:EI Compendex(R)  
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04819425 E.I. No: EIP97093821175

**Title:** Telerobotic macros for remote handling of protein crystals  
**Author:** Hannaford, Blake; Hewitt, James; Maneewarn, Thavida; Venema, Steven; Appleby, Matthew; Ehresman, Robert  
**Corporate Source:** Univ of Washington, Seattle, WA, USA  
**Conference Title:** Proceedings of the 1997 8th International Conference on Advanced Robotics, ICAR'97  
**Conference Location:** Monterey, CA, USA **Conference Date:** 19970707-19970709  
**E.I. Conference No.:** 46955  
**Source:** International Conference on Advanced Robotics, Proceedings, ICAR 1997. IEEE, Piscataway, NJ, USA, 97TH8308. p 887-892  
**Publication Year:** 1997  
**CODEN:** 002658  
**Language:** English

**Title:** Telerobotic macros for remote handling of protein crystals  
...Abstract: space station. This system uses a miniature direct drive robot, CCD television cameras, and a client-server computing system using internet protocols to support the capture of protein crystals from aqueous growth solutions. The system was demonstrated between Huntsville AL. and Seattle WA. An operator in Huntsville controlled the mini robot by invoking pre-defined relative and absolute macro files. A set of movement macros (a predefined sequence of multi-device movement commands) were developed to support precision motion between task locations in the glovebox. The operator can invoke the macros by clicking icons in the remote control interface. The system is...  
**Descriptors:** Robotics; Remote control; Materials handling; Telecontrol equipment; Microgravity processing; Motion control; Macros; Graphical user interfaces; Proteins; Crystals  
**Identifiers:** Telerobotic macros; Remote handling

32/3,K/2 (Item 2 from file: 8)  
DIALOG(R)File 8:EI Compendex(R)  
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04630429 E.I. No: EIP97023530294

**Title:** Efficiency of computer supported learning material (by integrating simulations and hypertext)  
**Author:** Haertel, Hermann  
**Corporate Source:** Univ of Kiel, Kiel, Ger  
**Conference Title:** Proceedings of the 1996 26th Annual Conference on Frontiers in Education, FIE'96. Part 2 (of 3)  
**Conference Location:** Salt Lake City, UT, USA **Conference Date:** 19961106-19961109  
**E.I. Conference No.:** 46084  
**Source:** Technology-Based Re-Engineering Engineering Education Proceedings - Frontiers in Education Conference v 2 1996. IEEE, Piscataway, NJ, USA, 96CB35946. p 676-680  
**Publication Year:** 1996  
**CODEN:** PFECDR **ISSN:** 0190-5848  
**Language:** English

...Abstract: within the CoLoS project to overcome the obstacle of complex interfaces. This method permits to control a simulation through active links, embedded in learning or exercise material in html-format. Such material and the linking mechanism can be prepared by a single teacher and distributed over the net. The implementation is done by using standard ICCCM methods of the X-windows system. This...

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Descriptors: Computer aided instruction; Education computing; Computer simulation ; Information technology; Teaching; Computer networks; Graphical user interfaces; Animation; Mechanics; Problem solving

32/3,K/3 (Item 3 from file: 8)  
DIALOG(R)File 8: Ei Compendex(R)  
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04265289 E.I. No: EIP95102889021  
Title: Remote exploratoriums: combining network media with design environments  
Author: Perrone, Corrina; Repenning, Alexander  
Corporate Source: Univ of Colorado, Boulder, CO, USA  
Conference Title: Proceedings of the Conference on Human Factors in Computing Systems. Part 2 (of 2)  
Conference Location: Denver, CO, USA Conference Date: 19950507-19950511  
E.I. Conference No.: 43724  
Source: Human Factors in Computing Systems (CHI) - Conference Proceedings v 2 1995. ACM, New York, NY, USA. p 117-118  
Publication Year: 1995  
CODEN: 002163  
Language: English

Abstract: In an educational context World Wide Web clients such as Mosaic are of limited value because they put learners into the role of...

...engaged, hands-on learning experiences through interactive exhibits that are not only observed but are actively manipulated. The Agentsheets Remote Exploratorium is a mechanism to facilitate the easy exchange and distribution of educational interactive exhibits through networks. Agentsheets is a programming substrate to create interactive simulation and design environments. In this paper, we discuss the implications of combining a network medium...

Descriptors: Computer networks; Interactive devices; Computer simulation ; Interactive computer systems; Computer programming; Information technology

Identifiers: World wide web ; Design environments; Agentsheets remote exploratorium; Distance education; Combining network media; Interactive simulation ; Visual programming languages

32/3,K/4 (Item 4 from file: 8)  
DIALOG(R)File 8: Ei Compendex(R)  
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03569434 E.I. Monthly No: EI9303028752  
Title: PETRI-S: Un simulateur de systemes de production automatisees decrits a l'aide de reseaux de Petri interpretes colores.  
Title: PETRI-S: A simulator of automated production systems described with the aid of colored interpreted Petri nets.  
Author: Tankoano, J.; Boudebous, D.; Derniame, J. C.  
Corporate Source: Inst Africain d'Informatique, Libreville, Gabon  
Source: Automatic Control Production Systems(Automatique Productique Informatique Industrielle) v 25 n 1 1991 p 1-30  
Publication Year: 1991  
CODEN: RAPIEK ISSN: 0296-1598  
Language: French; English

Title: PETRI-S: A simulator of automated production systems described with the aid of colored interpreted Petri nets.

...Abstract: a computer-aided design tool for rapid prototyping of manufacturing systems. Based on a conjoint simulation of both control system and controlled process, this tool rests on a Coloured Interpreted Petri Net specifying the control system behavior, together with an



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approach to the modelling of **control** systems environment and **activity** flow which is easy to apply. In a design process, PETRI-S is useful either for control systems debugging, dialogue to clarify end **users** requirements, or for productivity evaluation in order to have the best choice for monitoring and...

Identifiers: PETRI-S; COLORED INTERPRETED PETRI **NET** ; CONTROL SYSTEMS DEBUGGING

32/3,K/5 (Item 1 from file: 2)  
DIALOG(R)File 2:INSPEC  
(c) 2003 Institution of Electrical Engineers. All rts. reserv.

5937889 INSPEC Abstract Number: C9807-3385-013

Title: **A tele-micro-surgery system with co-located view and operation points and a rotational -force-feedback-free master manipulator**

Author(s): Mitsuishi, M.; Watanabe, T.; Nakanishi, H.; Hori, T.; Watanabe, H.; Kramer, B.

Author Affiliation: Fac. of Eng., Tokyo Univ., Japan

Conference Title: Second Annual International Symposium on Medical Robotics and Computer Assisted Surgery, MRCAS '95 p.111-18

Publisher: Wiley-Liss, New York, NY, USA

Publication Date: 1995 Country of Publication: USA 358 pp.

Material Identity Number: XX95-02918

Conference Title: Proceedings of 2nd International Symposium on Medical Robotics and Computer Assisted Surgery

Conference Sponsor: Johns Hopkins Inst.; Shadyside Hospital; Carnegie Mellon Univ.; IEEE et al

Conference Date: 4-7 Nov. 1995 Conference Location: Baltimore, MD, USA

Language: English

Subfile: C

Copyright 1998, IEE

Title: **A tele-micro-surgery system with co-located view and operation points and a rotational -force-feedback-free master manipulator**

Abstract: The paper describes a system with which a human **operator** can easily execute a surgical operation by reducing surgical motions, conventionally executed by a medical...

... microscope. The system can also be operated from a remote location using, for example, the **Internet**. In particular, a vision system which has a fixed visual point and a slave manipulator...

... effector and object. Furthermore, the design of the system allows for the development of a **rotational -force-feedback-free master manipulator**, because only translational force is developed under the assumption that the tip of the...

... information acquisition and display systems are controlled in accordance with the inferred intention of the **operator**. Finally, a tele-micro-handling experiment was performed using the **Internet** and two artificial satellites.

... Descriptors: **Internet** ; ...

... **telerobotics**

... Identifiers: **rotational -force-feedback-free master manipulator...**  
... **human operator** ; ...

... **Internet** ;

32/3,K/6 (Item 2 from file: 2)  
DIALOG(R)File 2:INSPEC  
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5769865 INSPEC Abstract Number: C9801-3390M-024

Title: Control of an industrial robot via WWW Internet type graphical interfaces

Author(s): Bittner, C.A.; Knoche, H.

Journal: Elektronik vol.46, no.17 p.34-6, 38, 40

Publisher: Franzis-Verlag,

Publication Date: 19 Aug. 1997 Country of Publication: Germany

CODEN: EKRKAR ISSN: 0013-5658

SICI: 0013-5658(19970819)46:17L:34:CIRI;1-V

Material Identity Number: E071-97018

Language: German

Subfile: C

Copyright 1997, IEE

Title: Control of an industrial robot via WWW Internet type graphical interfaces

Abstract: Shows a robot controller whose software is controlled via WWW (world-wide web) "clients", using the C++ programming language to control an image analysis system which, in turn operates component grippers for an assembly process. The WWW client is used as the user surface. Dynamic documents are generated by means of the PERL language, using a CGI information program. The program is transmitted via an HTTP server to a WWW client. Thus object movements can be controlled via the Internet.

...Descriptors: graphical user interfaces...

... Internet ; ...

... telerobotics

...Identifiers: WWW Internet type graphical interfaces...

... user surface...

...WWW client ;

32/3,K/7 (Item 3 from file: 2)

DIALOG(R)File 2:INSPEC

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5722548 INSPEC Abstract Number: A9722-8770G-015, B9711-7520-034, C9711-3385-035

Title: A tele-micro-surgery system with multi-modal information presentation capability

Author(s): Mitsuishi, M.; Nakanishi, H.; Watanbe, H.

Author Affiliation: Fac. of Eng., Tokyo Univ., Japan

Conference Title: Proceedings of the Japan-USA Symposium on Flexible Automation - 1996 Part vol.1 p.261-8 vol.1

Editor(s): Stelson, K.; Oba, F.

Publisher: ASME, New York, NY, USA

Publication Date: 1996 Country of Publication: USA 2 vol. xviii+1565 pp.

ISBN: 0 7918 1231 6 Material Identity Number: XX96-02086

Conference Title: Proceedings of 1996 Japan-USA Symposium on Flexible Automation

Conference Sponsor: ASME; Inst. Syst. Control & Inf. Eng. Japan

Conference Date: 7-10 July 1996 Conference Location: Boston, MA, USA

Language: English

Subfile: A B C

Copyright 1997, IEE

Abstract: This paper describes a system with which a human operator can easily execute a surgical operation by reducing surgical motions, conventionally executed by a medical...

... microscope. The system can also be operated from a remote location using, for example, the Internet and artificial satellites. In the

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system, in particular, a vision system which has a fixed...

...information acquisition and display systems are controlled in accordance with the inferred intention of the **operator** to enhance the operability of the system. Another feature of the system is the transformation...

... end-effector and object. Furthermore, the design of the system allows for the development of **rotational -force-feedback-free master** manipulators, because only translational force is developed under the assumption that the tip of the...

...Descriptors: **Internet** ; ...

... **telerobotics**

...Identifiers: human **operator** ; ...

... **Internet** ; ...

... **rotational -force-feedback-free master** manipulators

32/3,K/8 (Item 4 from file: 2)

DIALOG(R)File 2:INSPEC

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5611303 INSPEC Abstract Number: C9708-6115-006

Title: **Building Web applications with WebHub**

Author(s): Peterson, E.S.

Journal: **WEB Techniques** vol.2, no.7 p.67-70

Publisher: Miller Freeman,

Publication Date: July 1997 Country of Publication: USA

CODEN: WETEFA ISSN: 1086-556X

SICI: 1086-556X(199707)2:7L:67:BAWW;1-#

Material Identity Number: F184-97006

Language: English

Subfile: C

Copyright 1997, IEE

Title: **Building Web applications with WebHub**

Abstract: World Wide **Web** applications (**Web** apps) are interactive **Internet** applications that use HTML as their **user** interface. Anything that executes on the **client** side may be part of a **Web** app, but these include server-side programs that dynamically create HTML pages and synergize other **Internet** technology such as Java applets, **ActiveX controls** , GIF files, **VRML** and **SMTP**. By applying **Internet** technology to existing data resources, companies can avoid multiple **client** installs, resulting in lower maintenance costs and less per-**client** licenses. In this article, I explore the general architecture and features of a **Web** app and examine one of the several available products for creating dynamic **Web** content: WebHub, from HREF Tools Inc., a **Web** app toolkit for Delphi and C++ Builder.

...Descriptors: **client** -server systems...

... **Internet** ;

Identifiers: World Wide **Web** applications...

...interactive **Internet** applications...

... **user** interface...

... **client** -side execution...

... **client** licenses...

...dynamic **Web** content

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32/3,K/9 (Item 5 from file: 2)

DIALOG(R)File 2:INSPEC

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5399858 INSPEC Abstract Number: C9611-3385-020

**Title: A tele-microsurgery system that shows what the user wants to see**

Author(s): Mitsuishi, M.; Watanabe, T.; Nakanishi, H.; Hori, T.; Asai, R.; Watanabe, H.

Author Affiliation: Fac. of Eng., Tokyo Univ., Japan

Conference Title: Proceedings 4th IEEE International Workshop on Robot and Human Communication. RO-MAN'95 TOKYO (Cat. No.95TH8115) p.237-46

Publisher: IEEE, New York, NY, USA

Publication Date: 1995 Country of Publication: USA v+386 pp.

ISBN: 0 7803 2904 X Material Identity Number: XX96-02862

U.S. Copyright Clearance Center Code: 0 7803 2904 X/95/\$4.00

Conference Title: Proceedings 4th IEEE International Workshop on Robot and Human Communication

Conference Sponsor: IEEE Ind. Electron. Soc.; Inst. Electron., Inf. Commun. Eng.; Soc. Instrum. & Control Eng.; Robotics Soc. Japan; Japan Soc. Mech. Eng.; New Technol. Found.; Int. Media Res. Found.; Adv. Telecommun. Res. Inst.; IEEE Robotics & Autom. Soc.; IEEE Neural Networks Council; IEEE R&A Soc. Tech. Committee on Virtual Reality in Robotics; IEE of Japan; Inf. Process. Soc. Japan; Inst. Image Electron. Eng. Japan; Japanese Psychol. Assoc.; Japan Soc. Med. Electron. & Biological Eng.; Inst. Television Eng. Japan; Japan Neural Network Soc.; Japan Soc. Fuzzy Theory & Syst.; Japan Soc. Artificial Intelligence; Japan Ergonomics Res. Soc

Conference Date: 5-7 July 1995 Conference Location: Tokyo, Japan

Language: English

Subfile: C

Copyright 1996, IEE

**Title: A tele-microsurgery system that shows what the user wants to see**

...Abstract: scale. The system can also be operated from a remote location using, for example, the **Internet**. In particular, a vision system having a fixed visual point and a slave manipulator which...

... point of the microscope. The visual information acquisition and display systems are controlled by the **operator**. In the slave manipulator, the axes of all rotational DOF, also intersect at this point...

... of the system. Furthermore, the design of the system allows for the development of a **rotational** -force-feedback-free **master** manipulator.

...Descriptors: **telerobotics**

32/3,K/10 (Item 6 from file: 2)

DIALOG(R)File 2:INSPEC

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5094344 INSPEC Abstract Number: A9523-8770G-012, B9512-7520-009, C9512-3385-011

**Title: Development of an inter-world tele-micro-surgery system with operational environment information transmission capability**

Author(s): Mitsuishi, M.; Kobayashi, K.; Watanabe, T.; Nakanishi, H.; Watanabe, H.; Kramer, B.

Author Affiliation: Fac. of Eng., Tokyo Univ., Japan

Conference Title: Proceedings of 1995 IEEE International Conference on Robotics and Automation (Cat. No.95CH3461-1) Part vol.3 p.3081-8 vol.3

Publisher: IEEE, New York, NY, USA

Publication Date: 1995 Country of Publication: USA 3 vol. (xxxxviii+xxxvi+3166) pp.

ISBN: 0 7803 1965 6

U.S. Copyright Clearance Center Code: 0 7803 1965 6/95/\$4.00

August 20, 2003

Conference Title: Proceedings of 1995 IEEE International Conference on Robotics and Automation

Conference Sponsor: Sci. Council of Japan; Robotics Soc. Japan; Soc. Instrum. & Control Eng.; Japan Soc. Mech. Eng.; IEEE Robotics & Autom. Soc

Conference Date: 21-27 May 1995 Conference Location: Nagoya, Japan

Language: English

Subfile: A B C

Copyright 1995, IEE

...Abstract: vision system which is focused at the end of a surgical tool and a slave **manipulator**, the **rotational** axes of which intersect at the same focal point. These mechanisms realize high positionability that...

... transformation of multi-axis force information to sounds that can be easily interpreted by the **operator** to indicate the contact state between the tool and the object. Furthermore, an inter-world tele-micro-handling experiment has been executed successfully from a remote site using the **Internet** and two artificial satellites.

...Descriptors: **telerobotics**

...Identifiers: **Internet** ;

32/3,K/11 (Item 7 from file: 2)

DIALOG(R)File 2:INSPEC

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02002290 INSPEC Abstract Number: B83014916

Title: **Design and development of a second generation relative navigation analytic simulator for JTIDS full scale development**

Author(s): Dunn, R.; Zangaro, C.; Foster, J.L.; Purcell, R.; Wai Tsang; Waldron, D.; Savage, G.

Author Affiliation: Intermetrics Inc., Warminster, PA, USA

Conference Title: IEEE PLANS 82. Position Location and Navigation Symposium p.159-65

Publisher: IEEE, New York, NY, USA

Publication Date: 1982 Country of Publication: USA ix+411 pp.

U.S. Copyright Clearance Center Code: CH1820-0/82/0000-0159\$00.75

Conference Sponsor: IEEE

Conference Date: 6-9 Dec. 1982 Conference Location: Atlantic City, NJ, USA

Language: English

Subfile: B

Title: **Design and development of a second generation relative navigation analytic simulator for JTIDS full scale development**

Abstract: The Second Generation of Relative Navigation Analytical **Simulator** (RNAS II) is a Monte Carlo analytical **simulation** of the operation of the Joint Tactical Information Distribution System (JTIDS) Relative Navigation community. RNAS...

...identify critical technology needs; to evaluate solutions to other JTIDS issues related to integration and **net** management. For each simulated platform, RNAS II is capable of simulating Relative Navigation function aboard the terminal operating as either Navigation **Controller**, **net** time reference, **active user** or passive **user**. RNAS II is also capable of simulating difference types of dead reckoner for each member...

... based on the need of a particular scenario. Initial release of RNAS II supports the **simulation** of a community of 15 members with capacity to expand to over 100 members. The...

...Identifiers: relative navigation analytic **simulator** ; ...

...Monte Carlo analytical **simulation** ;

August 20, 2003

32/3,K/12 (Item 1 from file: 233)  
DIALOG(R)File 233:Internet & Personal Comp. Abs.  
(c) 2003, EBSCO Pub. All rts. reserv.

00453684 97DT03-003

Build ActiveX controls with Delphi -- If you build applications with Delphi and need to share your Delphi components with Visual Basic, PowerBuilder, or C++ developers,...

Hill, Robert

DATA BASED ADVISOR , March 1, 1997 , v15 n3 p18-21, 3 Page(s)

ISSN: 0740-5200

Company Name: Apiary

Product Name: OCX Expert 1.0

Build ActiveX controls with Delphi -- If you build applications with Delphi and need to share your Delphi components...

... Expert 1.0 (\$249), a software tool for Delphi, from Apiary Inc. of Little Rock, AR (501). Says it converts Delphi components into ActiveX controls and guides the user through the conversion process. Adds that it offers seamless integration with the Delphi IDE, a simple interface, and ease of ActiveX - control distribution. However, says it does not support data-aware controls, and the resulting ActiveX controls are too large for Internet development. Calls it a must have for the Delphi developer. Includes two screen displays and...

32/3,K/13 (Item 1 from file: 483)  
DIALOG(R)File 483:Newspaper Abs Daily  
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04793005

Creating a Community: A virtual world in Phoenix has allowed inner-city Students to cope better in the real world

Bannon, Lisa

Wall Street Journal, Sec R, p 10, col 4

Nov 17, 1997

ISSN: 0099-9660 NEWSPAPER CODE: WSJ

DOCUMENT TYPE: News; Newspaper

LANGUAGE: English RECORD TYPE: ABSTRACT

LENGTH: Long (18+ col inches)

Creating a Community: A virtual world in Phoenix has allowed inner-city Students to cope better in the real world

...ABSTRACT: of guidance, violent neighborhoods and poor role models. Pueblo was developed by Xerox as an Internet-accessible virtual world with its own geography, characters and objects. Visitors, after being given a password to enter the community, create a character for themselves and build their own cyberspace home with descriptions of rooms as elaborate or simple as they choose. They can explore...

...s public places, such as a city park or the Longview school, talk to other users in group settings or one-on-one, manipulate objects and move around the community to see what others have created. Though the project uses text-only software, it is designed to give users a sense of being present with others in a physical space. The original idea behind...

32/3,K/14 (Item 1 from file: 6)  
DIALOG(R)File 6:NTIS  
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1842003 NTIS Accession Number: N95-11408/8

Use of Controls for Subsonic Transport Performance Improvement: Overview and Future Directions

Gilyard, G. ; Espana, M.

August 20, 2003

National Aeronautics and Space Administration, Edwards, CA. Hugh L. Dryden Flight Research Center.

Corp. Source Codes: 017303002; ND102102

Report No.: NAS 1.15:4605; H-2002; NASA-TM-4605; AIAA PAPER 94-3515

cAug 94 18p

Languages: English

Journal Announcement: GRAI9502; STAR3301

Presented at the Atmospheric Flight Mechanics Conference, Scottsdale, Az, 1-3 Aug. 1994.

Order this product from NTIS by: phone at 1-800-553-NTIS (U.S. customers); (703)605-6000 (other countries); fax at (703)321-8547; and email at orders@ntis.fedworld.gov. NTIS is located at 5285 Port Royal Road, Springfield, VA, 22161, USA.

NTIS Prices: PC A03/MF A01

Increasing competition among airline manufacturers and operators has highlighted the issue of aircraft efficiency. Fewer aircraft orders have led to an all...

... feasibility of applying adaptive optimal control techniques to performance optimization of redundant control effectors. A simulation evaluation of a preliminary control law optimizes wing-aileron camber for minimum net aircraft drag. Two submodes are evaluated: one to minimize fuel and the other to maximize...

... current fleet of subsonic transports. Available integrated controls technologies are reviewed to define approaches using active controls. A candidate control law for adaptive performance optimization is presented along with examples of algorithm operation.

...Descriptors: control; \*Aircraft performance; \*Control systems design; \*F-15 aircraft; \*Optimal control; \*Subsonic speed; \*Transport aircraft; Active control ; Aerodynamic drag; Control theory; Drag reduction; Wing camber

32/3,K/15 (Item 1 from file: 144)

DIALOG(R)File 144:Pascal

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13729982 PASCAL No.: 98-0422079

Remote supervisory control of a sensor based mobile robot via Internet

IROS '97 : intelligent robots and systems : Grenoble, September 7-11, 1997

LUO R C; TSE MIN CHEN

Intelligent Automation Laboratory, Department of Electrical Engineering, National Chung Cheng University, 160 Shang-Shing, Ming-Hsiung, Chia-Yi, 621, Taiwan

New Technology Foundation, Unknown.; Society of Instrumentation and Control Engineers of Japan, Tokyo, Japan.; Robotics Society of Japan, Tokyo, Japan.; IEEE. Industrial Electronics Society, United States.; IEEE. Robotics and Automation Society, United States.

International conference on intelligent robots and systems (Grenoble FRA) 1997-09-07

1997 1163-1168

Publisher: IEEE, New York NY

Language: English

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Remote supervisory control of a sensor based mobile robot via Internet

... and an autonomous mobile robot is constructed. The main feature of this architecture is that users just need a general purpose computer and a World Wide Web browser, they can command the mobile robot in a remote location through Internet and Home Page. Hardware configuration of this architecture includes a mobile robot, as server workstation...

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...Software design includes assignment of the server, communication between the server and robot, and the **user** interface. The architecture has extensive capabilities for **teleoperation**, **telerobotics** operations, and other multimedia services. Based on this architecture we have implemented multi-level operations for the **user** on various remote applications. At present, the system allows **users** to operate our mobile robot via the **Internet** and a friendly **user** interface (via our Home Page) rising supervisory and direct control modules and they can receive...

English Descriptors: Remote supervision; Remote **control** ; Robotics;  
**Moving** robot; **Internet** ; World wide **web** ; Computer hardware; Software;  
**User** interface; Collision avoidance; Collision detection

French Descriptors: Telesurveillance; Telecommande; Robotique; Robot mobile  
; **Internet** ; Reseau WWW; Materiel(informatique); Logiciel; Interface  
utilisateur; Prevention esquiv collision; Detection collision

Spanish Descriptors: Vigilancia a distancia; Control remoto; Robotica;  
Robot movil; **Internet** ; Red WWW; Material (informatica); Logicial;  
Interfase usuario; Prevencion esquiv colision

32/3,K/16 (Item 2 from file: 144)  
DIALOG(R)File 144:Pascal  
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13258929 PASCAL No.: 97-0530603  
**Rule modelling and simulation in ALFRED**  
**RIDS '97 : rules in database systems : Skoevde, June 26-28, 1997**  
SCHLESINGER M; LOERINCZE G  
GEPPERT Andreas, ed; BERNDTSSON Mikael, ed  
University of Bern, Institute of Information Systems, Engehaldenstr. 8,  
3012 Bern, Switzerland; University of Bern, Institute of Computer Science,  
Neubrueckstr. 10, 3012 Bern, Switzerland  
Rules in database systems. International workshop, 3 (Skoevde SWE)  
1997-06-26  
Journal: Lecture notes in computer science, 1997, 1312 83-99  
Language: English

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**Rule modelling and simulation in ALFRED**  
This paper presents rule modelling and **simulation** in the active database system ALFRED ( **Active Layer For Rule Execution in Database Systems**). In contrast to other systems, rules and **user** commands are represented entirely as enhanced Colored Petri Nets which we call Action Rule Flow...  
...the modelling of rule components, rule semantics, and rule triggering as well as for rule **simulation** . In this paper we describe how each rule component is represented as an ARFPN with respect to rule semantics. In addition, we discuss in detail the **simulation** of rule processing by means of an order workflow example.

English Descriptors: Modeling; Information system; Database management  
system; System architecture; Colored Petri **net**

32/3,K/17 (Item 3 from file: 144)  
DIALOG(R)File 144:Pascal  
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13056269 PASCAL No.: 97-0346245  
**Controlling mechanisms over the internet**  
**Open architecture control systems and standards : Boston MA, 20-21**



August 20, 2003

November 1996

LUMIA R

PROCTOR Frederick M, ed

University of New Mexico, Department of Mechanical Engineering,  
Albuquerque, NM 87131, United States

International Society for Optical Engineering, Bellingham WA, United  
States.

Open architecture control systems and standards. Conference (Boston MA  
USA) 1996-11-20

Journal: SPIE proceedings series, 1997, 2912 159-164

Language: English

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#### Controlling mechanisms over the internet

The **internet**, widely available throughout the world, can be used to control robots, machine tools, and other mechanisms. This paper will describe a low-cost virtual collaborative environment (VCE) which will connect **users** with distant equipment. The system is based on PC technology, and incorporates off-line-programming with on-line execution. A remote **user** programs the system graphically and simulates the motions and actions of the mechanism until satisfied...

... site to the local site where the real equipment exists. At the local site, the **simulation** is run again to check the program from a safety standpoint. Then, the local **user** runs the program on the real equipment. During execution, a camera in the real workspace provides an image back to the remote **user** through a teleconferencing system. The system costs approximately \$12.5K, and represents a low-cost...

English Descriptors: **Control** system; **Moving** robot; Learning; Distance;  
**Internet** ; Performance analysis

French Descriptors: Systeme commande; Robot mobile; Apprentissage; Distance  
; **Internet** ; Analyse performance

Spanish Descriptors: Sistema control; Robot movil; Aprendizaje; Distancia;  
**Internet** ; Analisis eficacia

32/3,K/18 (Item 1 from file: 34)

DIALOG(R)File 34:SciSearch(R) Cited Ref Sci

(c) 2003 Inst for Sci Info. All rts. reserv.

04510136 Genuine Article#: TJ171 No. References: 24

Title: **TACTILE DISPLAY OF VIBRATORY INFORMATION IN TELEOPERATION AND  
VIRTUAL ENVIRONMENTS**

Author(s): KONTARINIS DA; HOWE RD

Corporate Source: HARVARD UNIV,DIV APPL SCI,PIERCE HALL/CAMBRIDGE//MA/02138

Journal: PRESENCE-TELEOPERATORS AND VIRTUAL ENVIRONMENTS, 1995, V4, N4 (FAL  
) , P387-402

ISSN: 1054-7460

Language: ENGLISH Document Type: ARTICLE (Abstract Available)

Title: **TACTILE DISPLAY OF VIBRATORY INFORMATION IN TELEOPERATION AND  
VIRTUAL ENVIRONMENTS**

Abstract: This paper investigates the use of tactile displays for conveying task-related vibrations in **teleoperation** and **virtual environments**. Vibration displays can be implemented with inexpensive, open loop devices that can be added to...

Research Fronts: 93-2279 001 (INFORMATION ERA; IMPACT OF **INTERNET** NREN;  
CONTEMPORARY RETAIL BUILT ENVIRONMENT)

93-6801 001 (GRIP FORCE; ARM **MOVEMENTS** ; CORTICAL **CONTROL** OF THE  
PRIMATE HAND)

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32/3,K/19 (Item 2 from file: 34)  
DIALOG(R)File 34:SciSearch(R) Cited Ref Sci  
(c) 2003 Inst for Sci Info. All rts. reserv.

02725468 Genuine Article#: LZ357 No. References: 65  
**Title: GEOMETRICAL APPROACH TO NEURAL- NET CONTROL OF MOVEMENTS AND POSTURE**  
Author(s): PELLIONISZ AJ; RAMOS CF  
Corporate Source: NASA, AMES RES CTR, 242-3/MOFFETT FIELD//CA/94035; UNIV CALIF BERKELEY/BERKELEY//CA/94720  
Journal: PROGRESS IN BRAIN RESEARCH, 1993, V97, P245-256  
ISSN: 0079-6123  
Language: ENGLISH Document Type: REVIEW (Abstract Available)

**Title: GEOMETRICAL APPROACH TO NEURAL- NET CONTROL OF MOVEMENTS AND POSTURE**  
...Abstract: unit recordings. The second application of this geometrical approach to brain theory is modeling the **control** of posture and **movement**. A preliminary **simulation** study has been conducted with the aim of understanding the control of balance in a...  
...Research Fronts: 91-2426 001 (ELDERLY PERSONS; PREVENTING FALLS; RISK OF HIP FRACTURE; INJURIES IN INNER-CITY **WOMEN** )

32/3,K/20 (Item 3 from file: 34)  
DIALOG(R)File 34:SciSearch(R) Cited Ref Sci  
(c) 2003 Inst for Sci Info. All rts. reserv.

00742130 Genuine Article#: ER736 No. References: 20  
**Title: PETRI-S - SIMULATOR OF AUTOMATED PRODUCTION SYSTEMS DESCRIBED BY COLORED INTERPRETED PETRI NETWORKS**  
Author(s): TANKOANO J; BOUDEBOUS D; DERNIAME JC  
Corporate Source: INST AFRICAIN INFORMAT, BP 2263/LIBREVILLE//GABON/; CTR RECH INFORMAT NANCY/F-54506 VANDOEUVRE NANCY//FRANCE/  
Journal: RAIRO-AUTOMATIQUE-PRODUCTIQUE INFORMATIQUE INDUSTRIELLE-AUTOMATIC CONTROL PRODUCTION SYSTEMS, 1991, V25, N1, P1-30  
Language: FRENCH Document Type: ARTICLE (Abstract Available)

**Title: PETRI-S - SIMULATOR OF AUTOMATED PRODUCTION SYSTEMS DESCRIBED BY COLORED INTERPRETED PETRI NETWORKS**  
...Abstract: a computer-aided design tool for rapid prototyping of manufacturing systems. Based on a conjoint **simulation** of both control system and controlled process, this tool rests on a Coloured Interpreted Petri **Net** specifying the control system behavior, together with an approach to the modelling of **control** systems environment and **activity** flow which is easy to apply. In a design process, PETRI-S is useful either for control systems debugging, dialogue to clarify end **users** requirements, or for productivity evaluation in order to have the best choice for monitoring and...

32/3,K/21 (Item 4 from file: 34)  
DIALOG(R)File 34:SciSearch(R) Cited Ref Sci  
(c) 2003 Inst for Sci Info. All rts. reserv.

00723012 Genuine Article#: EQ839 No. References: 8  
**Title: NUMERICAL- SIMULATION OF SUBSURFACE-WATER RISE IN KUWAIT CITY**  
Author(s): HAMDAN L; MUKHOPADHYAY A  
Corporate Source: 6217 PRIMROSE DR/LA MESA//CA/92042; KUWAIT INST SCI RES, DIV WATER RESOURCES/SAFAT 13109//KUWAIT/  
Journal: GROUND WATER, 1991, V29, N1, P93-104  
Language: ENGLISH Document Type: ARTICLE (Abstract Available)

**Title: NUMERICAL- SIMULATION OF SUBSURFACE-WATER RISE IN KUWAIT CITY**

August 20, 2003

...Abstract: basements of buildings. To study this phenomenon, and to ascertain its causes, a numerical aquifer **simulation** model was developed. The aquifer model showed that, over the period 1961-1985, the **net** yearly addition to the aquifer storage due to the contribution from **man** -made sources like sewage systems, irrigation, and water distribution networks, ranged from 8,300 to...

...1990, if no remedial actions are undertaken. Preventive methods to reduce or eliminate recharge from **man** -made **activities** would help **control** the water-level rise and even lower the water table in affected areas. Remedial measures...

32/3,K/22 (Item 1 from file: 583)  
DIALOG(R) File 583:Gale Group Globalbase(TM)  
(c) 2002 The Gale Group. All rts. reserv.

06419246  
NETCOM DELER UT BONUS TIL TROSS FOR TAP  
NORWAY: NETCOM LOSES MARKET SHARE  
Dagens Naeringsliv (DN) 15 Jan 1997 p.21  
Language: NORWEGIAN

NETCOM DELER UT BONUS TIL TROSS FOR TAP

... and it lost more than 50,000 customers. At the beginning of 1995 NetCom's **client** base was 233,351 GSM subscribers whereas Telenor Mobil's was 259,425. Last year's **net** growth for NetCom was 50,000 GSM subscribers while Telenor Mobil' **net** growth was 274,090.

EVENT: National **Government** Economics

August 20, 2003

37/3,K/1 (Item 1 from file: 8)  
DIALOG(R)File 8:Ei Compendex(R)  
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04449276 E.I. No: EIP96073249158

Title: Identifying and reducing critical lag in finite element simulations

Author: Taylor, Valerie E.; Chen, Jian; Huang, Milana; Canfield, Thomas; Stevens, Rick

Corporate Source: Northwestern Univ

Source: IEEE Computer Graphics and Applications v 16 n 4 Jul 1996. p 67-71

Publication Year: 1996

CODEN: ICGADZ ISSN: 0272-1716

Language: English

...Abstract: studies the critical components of lag resulting from simulations executed on multiprocessors connected to the **virtual environment** via wide area networks. An extensive case study of a visualization system that displays the results of a finite element **simulation** of a contact-impact problem, specifically, a disk-brake system, is conducted. To identify the...

...performance model of the contributors: rendering, tracking, local network connections to the parallel system, parallel **simulation**, and various types of synchronization lag, are constructed. In addition, methods to reduce this lag...

Descriptors: Interactive computer graphics; Computer **simulation**; Finite element method; Virtual reality; Computer networks; Visualization; Computer graphics equipment; Multiprocessing systems; **User** interfaces; Supercomputers

Identifiers: **Cave** automatic **virtual environment**; Critical lag; End to end lag time; Disk brake system; Graphics component; **Head tracker**; Wand; Rendering process; **Internet**

37/3,K/2 (Item 2 from file: 8)  
DIALOG(R)File 8:Ei Compendex(R)  
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03844952 E.I. No: EIP94011176376

Title: Advanced LCD enhancement technology for improved display performance

Author: Eichenlaub, Jesse B.; Wright, John C.

Corporate Source: Dimension Technologies Inc., Rochester, NY, USA

Conference Title: Display Systems: High-Resolution and Large Screen Displays and Helmet, Head-Up, and Head-Down Displays

Conference Location: Munich, Ger Conference Date: 19930623-19930624

E.I. Conference No.: 19880

Source: Proceedings of SPIE - The International Society for Optical Engineering v 1988 1993. Publ by Society of Photo-Optical Instrumentation Engineers, Bellingham, WA, USA. p 242-249

Publication Year: 1993

CODEN: PSISDG ISSN: 0277-786X ISBN: 0-8194-1237-6

Language: English

...Abstract: by the author and various useful configurations defined. From this it has been established that **stereoscopic** displays can be obtained without either compromise to display surface resolution or requiring the viewer...

...confirmed that such display constructs may be usefully applied to direct view, projection mode, and **helmet** mounted systems to the **net** benefit of **operator** performance. 0 Refs.

Identifiers: Light valves; Projection mode displays; Backlighting sources; LCD enhancement; **Helmet** mounted systems

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37/3,K/3 (Item 1 from file: 2)  
DIALOG(R)File 2:INSPEC  
(c) 2003 Institution of Electrical Engineers. All rts. reserv.

7510634 INSPEC Abstract Number: C2003-02-6130V-065  
Title: Wandering in VR environments by estimating head pose using an omnica  
Author(s): Shigang Li; Ishizawa, F.; Chiba, N.  
Author Affiliation: Fac. of Eng., Iwate Univ., Morioka, Japan  
Conference Title: Proceedings 10th Pacific Conference on Computer Graphics and Applications p.318-24  
Editor(s): Coquillart, S.; Shum, H-Y.; Hu, S-M.  
Publisher: IEEE Comput. Soc, Los Alamitos, CA, USA  
Publication Date: 2002 Country of Publication: USA xiv+493 pp.  
ISBN: 0 7695 1784 6 Material Identity Number: XX-2002-03150  
U.S. Copyright Clearance Center Code: 0-7695-1784-6/02/\$17.00  
Conference Title: Proceedings 10th Pacific Conference on Computer Graphics and Applications  
Conference Date: 9-11 Oct. 2002 Conference Location: Beijing, China  
Language: English  
Subfile: C  
Copyright 2003, IEE

Title: Wandering in VR environments by estimating head pose using an omnica

Abstract: In the walk-through via the Internet , we move a mouse to imitate a walk by our foot (Chen, 1995). Here, we...

...a computer room as if we do in a museum for watching some arts. The user 's head motion at a relative large scale environment is needed to be known for...

... an omnidirectional image sensor to observe these markers. By mounting the visual sensor on a helmet , the head motion of a user who wears the helmet can be estimated by processing images captured from the omnidirectional image sensor. Since it has...

Descriptors: helmet mounted displays...

... Internet ; ...

... user interfaces  
...Identifiers: Internet ; ...

... head mounted display ; ...

... user interface

37/3,K/4 (Item 2 from file: 2)  
DIALOG(R)File 2:INSPEC  
(c) 2003 Institution of Electrical Engineers. All rts. reserv.

7403898 INSPEC Abstract Number: C2002-11-7810C-168  
Title: Spring: a general framework for collaborative, real-time surgical simulation  
Author(s): Montgomery, K.; Bruyns, C.; Brown, J.; Sorkin, S.; Mazzella, F.; Thonier, G.; Tellier, A.; Lerman, B.; Menon, A.  
Author Affiliation: Nat. Biocomputation Center, Stanford, CA, USA  
Conference Title: Medicine Meets Virtual Reality 02/10. Digital Upgrades: Applying Moore's Law to Health p.296-303  
Editor(s): Westwood, J.D.; Hoffman, H.M.; Robb, R.A.; Stredney, D.  
Publisher: IOS Press, Amsterdam, Netherlands  
Publication Date: 2002 Country of Publication: Netherlands xii+600

August 20, 2003

pp.

ISBN: 1 58603 203 8      Material Identity Number: XX-2002-01963

Conference Title: Medicine Meets Virtual Reality 02/10. Digital Upgrades:  
Applying Moore's Law to Health

Conference Date: 23-26 Jan. 2002      Conference Location: Newport Beach,  
CA, USA

Language: English

Subfile: C

Copyright 2002, IEE

Title: **Spring: a general framework for collaborative, real-time surgical simulation**

Abstract: We describe the implementation details of a real-time surgical simulation system with soft-tissue modeling and multi- user , multi-instrument, networked haptics. The simulator is cross-platform and runs on various Unix and Windows platforms. It is written in C++ with OpenGL for graphics; GLUT, GLUI, and MUI for user interface; and supports parallel processing. It allows for the relatively easy introduction of patient-specific...

... formats. It performs soft-tissue modeling, some limited rigid-body dynamics, and suture modeling. The simulator interfaces to many different interaction devices and provides for multi- user , multi-instrument collaboration over the Internet . Many virtual tools have been created and their interactions with tissue have been implemented. In addition, a number...

... extra features, such as voice input/output, real-time texture-mapped video input, stereo and head - mounted display support, and replicated display facilities are presented.

Identifiers: collaborative real-time surgical simulation ; ...

...multi- user multi-instrument networked haptics...

... Internet ; ...

... virtual tools ; ...

... head - mounted display support...

...computer-based surgical simulation

37/3,K/5      (Item 3 from file: 2)

DIALOG(R) File 2:INSPEC

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7121587      INSPEC Abstract Number: B2002-01-7820-006, C2002-01-6130V-055

Title: **Augmented reality in a wide area sentient environment**

Author(s): Newman, J.; Ingram, D.; Hopper, A.

Author Affiliation: AT&T Labs., Cambridge, UK

Conference Title: Proceedings IEEE and ACM International Symposium on  
Augmented Reality p.77-86

Publisher: IEEE Comput. Soc, Los Alamitos, CA, USA

Publication Date: 2001      Country of Publication: USA      xii+226 pp.

ISBN: 0 7695-1375 1      Material Identity Number: XX-2001-02539

U.S. Copyright Clearance Center Code: 0-7695-1375-1/01/\$10.00

Conference Title: Proceedings IEEE and ACM International Symposium on  
Augmented Reality

Conference Sponsor: Siemens Crop. Res.; Columbia Univ. Comput. Graphics &  
User Interfaces Lab.; Sony Comput. Sci. Lab.; Univ. Southern California;  
IEEE Comput. Soc. Task Force on Human-Centered Inf. Syst.; IEEE Comput.  
Soc. Tech. Committee on Wearable Inf. Syst.; ACM SIGCHI; ACM SIGGRAPH;  
Eurographics

Conference Date: 29-30 Oct. 2001      Conference Location: New York, NY,  
USA

Language: English

August 20, 2003

Subfile: B C  
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Abstract: Augmented reality ( AR ) both exposes and supplements the user's view of the real world. Previous AR work has focussed on the close registration of real and virtual objects, which requires very...

... and restricted to small volumes. In contrast, we have chosen to concentrate on allowing the AR user to roam freely within an entire building. At AT&T Laboratories Cambridge we provide personnel with AR services using data from an ultrasonic tracking system, called the Bat system, which has been deployed building-wide. We have approached the challenge of implementing a wide-area, in-building AR system in two different ways. The first uses a head - mounted display connected to a laptop, which combines sparse position measurements from the Bat system with more...

... or coexist with the real world. The second uses a PDA to provide a convenient portal with which the user can quickly view the augmented world . These systems can be used to annotate the world in a more-or-less seamless...

...Descriptors: helmet mounted displays...

... user interfaces

...Identifiers: AR work...

... AR user ; ...

... AR services...

...wide-area in-building AR system...

... head - mounted display ; ...

... augmented world

37/3,K/6 (Item 4 from file: 2)

DIALOG(R)File 2:INSPEC

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6963995 INSPEC Abstract Number: C2001-08-6115-003

Title: VRML 2.0 PerfToolkit for large-scale virtual environments  
authoring

Author(s): Jeongdan Choi; Kwangman Oh; Byungtae Jang

Author Affiliation: Dept. of Virtual Reality Res. Center, ETRI-CSTL, Taejon, South Korea

Conference Title: Proceedings VSMM 2000. 6th International Conference on Virtual Systems and MultiMedia p.248-55

Publisher: Ohmsha & IOS Press, Tokyo, Japan & Amsterdam, Netherlands

Publication Date: 2000 Country of Publication: Netherlands xiv+727 pp.

ISBN: 4 274 90407 5 Material Identity Number: XX-2000-02534

Conference Title: Proceedings of International Society on Virtual Systems and Multimedia. 6th International Conference on VSMM

Conference Date: 3-6 Oct. 2000 Conference Location: Gifu, Japan

Language: English

Subfile: C

Copyright 2001, IEE

Title: VRML 2.0 PerfToolkit for large-scale virtual environments  
authoring

Abstract: The paper presents the PerfToolkit for authoring and navigating a large-scale immersive virtual environment based on VRML 2.0. It consists of an event handler (authoring manager), a VRML 2.0 Authoring

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API, a real-time navigator, an icon viewer, a key frame animator, and a smart user interface. In particular, in order to achieve real time rendering of large data, we implement the portal and texture method, which is useful to support complex VE with multiple partitions such as Internet shopping malls. To improve the reality of a virtual environment, we introduce VR I/O devices such as HMD, CyberGlove, CrystalEyes, and Spaceball for user interactions. Our toolkit is very useful to construct complex VE applications such as visual simulation, interactive entertainment, and architectural walkthrough.

...Descriptors: graphical user interfaces...

Identifiers: VRML 2...

...large-scale virtual environment authoring...

...large-scale immersive virtual environment ; ...

... VRML Authoring API...

...smart user interface...

... Internet shopping malls...

... VR I/O devices...

... HMD ; ...

... user interactions...

...visual simulation ;

37/3,K/7 (Item 5 from file: 2)

DIALOG(R)File 2:INSPEC

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6832452 INSPEC Abstract Number: C2001-03-5430-004

Title: Position determination for wearables

Author(s): Johnston, D.J.; Clark, A.F.

Author Affiliation: VASE Lab., Essex Univ., Colchester, UK

Conference Title: IEE Seminar Wearable Computing (Ref. No.00/145) p.

3/1-4

Publisher: IEE, London, UK

Publication Date: 2000 Country of Publication: UK 52 pp.

Material Identity Number: XX-2000-03173

Conference Title: IEE Seminar Wearable Computing

Conference Sponsor: IEE

Conference Date: 29 Nov. 2000 Conference Location: London, UK

Language: English

Subfile: C

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...Abstract: depend critically on the accuracy of the positional information that can be obtained. Augmented Reality (AR)-where computer-generated virtual graphics are superimposed over a real-world scene, typically via a Virtual Reality (VR) headset -demands highly-accurate location and orientation information of the user's head within 3D space. On the other hand, a wearable urban navigation system requires...

...walks past a cinema); interactive directions to a place of interest; and even position-mediated Web browsing, where passing a shop window causes Web pages of the latest special offers, say, to be presented. The alarming prospect of empty...

...Identifiers: Web browsing



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37/3,K/8 (Item 6 from file: 2)  
DIALOG(R)File 2:INSPEC  
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6710182 INSPEC Abstract Number: C2000-10-5540B-027  
Title: **Strolling through cyberspace with your hands in your pockets:  
head directed navigation in virtual environments**  
Author(s): Fuhrmann, A.; Schmalstieg, D.; Gervautz, M.  
Author Affiliation: Vienna Univ. of Technol., Austria  
Conference Title: Virtual Environments '98. Proceedings of the  
Eurographics Workshop p.216-25  
Editor(s): Gobel, M.; Landauer, J.; Lang, U.; Wapler, M.  
Publisher: Springer-Verlag/Wien, Wien, Austria  
Publication Date: 1998 Country of Publication: Austria viii+335 pp.  
ISBN: 3 211 83233 5 Material Identity Number: XX-2000-01996  
Conference Title: Virtual Environments '98. Proceedings of the  
Eurographics Workshop  
Conference Date: 16-18 June 1998 Conference Location: Stuttgart,  
Germany  
Language: English  
Subfile: C  
Copyright 2000, IEE

Title: **Strolling through cyberspace with your hands in your pockets:  
head directed navigation in virtual environments**  
...Abstract: for navigating large virtual spaces. For walkthrough  
applications such as architectural visualization or games, the **user** is  
often required to cover simulated distances. In doing so, inexperienced  
**users** often have a hard time learning complicated navigation patterns with  
3-D mice or similar input devices. In large **virtual worlds**, this  
frequently leads to disorientation. With head directed navigation, the  
**user** navigates the **virtual environment** only by orienting his or her  
head. An orientation tracker mounted on the **head - mounted display** worn  
by the **user** is used to derive the navigation commands. Besides the  
approach's simplicity, the **user**'s hands are left free for other tasks.  
...Descriptors: **user** interfaces  
Identifiers: **cyberspace** ; ...

... **virtual environments** ; ...

... **head - mounted display**

37/3,K/9 (Item 7 from file: 2)  
DIALOG(R)File 2:INSPEC  
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6644823 INSPEC Abstract Number: C2000-08-6115-018  
Title: **A design and implementation of immersive virtual space authoring  
system**  
Author(s): Choi, J.; Lee, C.; Oh, K.; Park, C.  
Conference Title: Proceedings of International Conference on Virtual  
Systems and Multimedia VSMM '99 p.318-24  
Publisher: Abertay Dundee Univ, Dundee, UK  
Publication Date: 1999 Country of Publication: UK xiv+550 pp.  
Material Identity Number: XX-2000-01512  
Conference Title: Proceedings of International Conference on Virtual  
Systems and Multimedia VSMM '99  
Conference Date: 1-3 Sept. 1999 Conference Location: Dundee, UK  
Language: English  
Subfile: C  
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Abstract: The paper describes an immersive virtual space authoring system

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to help develop VR applications. Our system supporting the immersive user interface on the desktop is composed of VR hardware controlling software modules, 3D authoring software modules and VR I/O devices such as CyberGlove and HMD. We also develop the immersion toolkit to support high level programming for VRML object manipulation. The paper suggests an extended VRML format that allows preview of 3D VRML objects prior to loading them. It is useful to support a drag-and-drop authoring interface while immersed, and to reduce the retrieval cost of ultimate 3D VRML data on the Internet.

...Descriptors: Internet ; ...

... user interfaces

...Identifiers: VR application development...

...immersive user interface...

... VR hardware controlling software modules...

... VR I/O devices...

... HMD ; ...

... VRML object manipulation...

...extended VRML format...

...3D VRML objects...

...3D VRML data...

... Internet

37/3,K/10 (Item 8 from file: 2)

DIALOG(R)File 2:INSPEC

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6404046 INSPEC Abstract Number: C1999-12-6130V-033

Title: Cyberspace and mock apple pie: a vision of the future of graphics and virtual environments

Author(s): Capps, M.; Watsen, K.; Zyda, M.

Author Affiliation: Naval Postgraduate Sch., Monterey, CA, USA

Journal: IEEE Computer Graphics and Applications vol.19, no.6 p.

8-11

Publisher: IEEE,

Publication Date: Nov.-Dec. 1999 Country of Publication: USA

CODEN: ICGADZ ISSN: 0272-1716

SICI: 0272-1716(199911/12)19:6L:8:CMVA;1-2

Material Identity Number: A822-1999-006

U.S. Copyright Clearance Center Code: 0272-1716/99/\$10.00

Language: English

Subfile: C

Copyright 1999, IEE

Title: Cyberspace and mock apple pie: a vision of the future of graphics and virtual environments

Abstract: We assume that in the future any user's display platform can render fantastically complex scenes. Having finally shed the concerns related to...

... graphics medium, developers will concentrate on the message. Content will be key-no longer will users accept nonsensical, artistically vacant environments simply because they're presented in a head-mounted display. This will also mean that static worlds, no matter how aesthetically pleasing, will come second...

August 20, 2003

...focuses on other aspects of CVEs, the National Research Council's report on Modeling and Simulation provides excellent recommendations for future avenues of research in CGA, such as behavior adaptability and...

Identifiers: virtual environments ; ...

...collaborative virtual environments

37/3,K/11 (Item 9 from file: 2)

DIALOG(R)File 2:INSPEC

(c) 2003 Institution of Electrical Engineers. All rts. reserv.

6346600 INSPEC Abstract Number: C1999-10-6130V-025

Title: Old theories, new technologies: cumulative clutter effects using augmented reality

Author(s): Stedmon, A.W.; Kalawsky, R.S.; Hill, K.; Cook, C.A.

Author Affiliation: Centre for Human Sci., Defence Evaluation & Res. Agency, UK

Conference Title: 1999 IEEE International Conference on Information Visualization (Cat. No. PR00210) p.132-7

Editor(s): Banissi, E.; Khosrowshahi, F.; Sarfraz, M.; Tatham, E.; Ursyn, A.

Publisher: IEEE Comput. Soc, Los Alamitos, CA, USA

Publication Date: 1999 Country of Publication: USA xv+597 pp.

ISBN: 0 7695 0210 5 Material Identity Number: XX-1999-02067

U.S. Copyright Clearance Center Code: 0 7695 0210 5/99/\$10.00

Conference Title: 1999 IEEE International Conference on Information Visualization

Conference Date: 14-16 July 1999 Conference Location: London, UK

Language: English

Subfile: C

Copyright 1999, IEE

Abstract: The paper investigates human cognitive performance when information is presented via augmented reality ( AR ) and overlaid upon a primary display. Initial results support traditional experimental paradigms of human memory...

... 1956) and comprehension of information (C.D. Wickens, 1992), and have been used to compare AR and standard display formats when used in isolation. Results from these experiments provide a fundamental baseline for cognitive performance with a see-through AR headset . Furthermore the results lay the foundations for more comprehensive trials later in the research programme when the display formats are combined to provide a full AR facility. Consideration is given to the specific effects of cumulative clutter and two experiments are...

... consideration is given to key points addressed in the experimental design. Details of a dedicated Web site are provided where information will be consolidated and provide a basis for developing guidelines for the future development and application of AR technology.

...Descriptors: user interfaces

...Identifiers: see-through AR headset ; ...

... AR facility...

...dedicated Web site...

... AR technology

37/3,K/12 (Item 10 from file: 2)

DIALOG(R)File 2:INSPEC

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6035633 INSPEC Abstract Number: C9811-6130B-015

Title: The virtual reality modeling language explained

August 20, 2003

Author(s): Carey, R.  
Author Affiliation: Wasabi Software, USA  
Journal: IEEE Multimedia vol.5, no.3 p.84-93  
Publisher: IEEE,  
Publication Date: July-Sept. 1998 Country of Publication: USA  
CODEN: IEMUE4 ISSN: 1070-986X  
SICI: 1070-986X(199807/09)5:3L:84:VRML;1-L  
Material Identity Number: B466-98004  
U.S. Copyright Clearance Center Code: 1070-986X/98/\$10.00  
Language: English  
Subfile: C  
Copyright 1998, IEE

Abstract: **VRML** stands for Virtual Reality Modeling Language. Technically, **VRML** is neither virtual reality nor a modeling language. Virtual reality generally implies an immersive 3D experience, which typically requires a **head mounted display (HMD)** and 3D input devices, such as digital gloves. **VRML** neither requires nor imposes immersion. Furthermore, a true modeling language would contain richer geometric modeling primitives and mechanisms. **VRML** provides a bare minimum of geometric modeling features but contains numerous features unavailable in a modeling language. If **VRML** is not virtual reality or a modeling language, what is it? This question has several answers. At its core, **VRML** serves as a 3D interchange format. It defines most of the commonly used semantics found...

... animation, fog, material properties, and texture mapping. Here's a second answer to: what is **VRML**? It's a 3D analog to HTML. This means that **VRML** serves as a simple, multiplatform language for publishing 3D **Web** pages. The fact that some information, including games, engineering models, scientific visualizations, educational experiences, and...

... 3D has motivated this language. Typically, these types of projects require intensive interaction, animation, and **user** participation and exploration beyond what a page, text, or image based format can handle. Another answer is that **VRML** provides the technology to integrate 3D, 2D, text, and multimedia into a coherent model.

...Identifiers: **VRML** ; ...

...3D **Web** page publishing...  
... **user** participation

37/3,K/13 (Item 11 from file: 2)  
DIALOG(R)File 2:INSPEC  
(c) 2003 Institution of Electrical Engineers. All rts. reserv.

5970413 INSPEC Abstract Number: C9808-7210-071

Title: **Immersive InterSpace system**

Author(s): Shiwa, S.; Kobayashi, M.; Kitagawa, A.; Ichikawa, T.  
Journal: NTT R & D vol.47, no.4 p.495-500  
Publisher: NTT,  
Publication Date: 1998 Country of Publication: Japan  
CODEN: NTTDEC ISSN: 0915-2326  
SICI: 0915-2326(1998)47:4L:495:IIS;1-Q  
Material Identity Number: N541-98005  
Language: Japanese  
Subfile: C  
Copyright 1998, IEE

Abstract: By studying various **stereoscopic** displays, we have developed a **head mounted display (HMD)** system to improve the sensation of immersion in the "InterSpace" system, which is a new telecommunication environment for many **users** in a 3D virtual space. The **HMD** system is confirmed to work with InterSpace via the **Internet**. We experienced a

August 20, 2003

better sensation of immersion than that obtained from the conventional "InterSpace" terminal because the HMD system gives images that have both depth by binocular parallax and a very wide field...

...Descriptors: Internet ;

...Identifiers: stereoscopic displays...

... head mounted display ; ...

... HMD system...

... Internet ;

37/3,K/14 (Item 12 from file: 2)

DIALOG(R)File 2:INSPEC

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5610328 INSPEC Abstract Number: C9708-0230-002

Title: The artificial intelligensia and virtual worlds

Author(s): Edgar, S.

Journal: Computers & Society vol.27, no.2 p.27-31

Publisher: ACM,

Publication Date: June 1997 Country of Publication: USA

CODEN: CMSCD3 ISSN: 0095-2737

SICI: 0095-2737(199706)27:2L:27:AIVW;1-A

Material Identity Number: B678-97002

Language: English

Subfile: C

Copyright 1997, IEE.

Title: The artificial intelligensia and virtual worlds

...Abstract: recent AI discussions. Another moral aspect is cybersex, i.e. communications about sex over the Internet or within a MUD (multi-user domain). MUDs are a type of virtual world, but what about virtual reality? The wearer of a virtual reality helmet is in a world alone, and needs no other real people there; any company or challenge can be provided by the fake environment. Becoming addicted to such worlds makes users unfit to live in this world.

...Identifiers: virtual worlds ; ...

... Internet ; ...

...multi- user domain

37/3,K/15 (Item 13 from file: 2)

DIALOG(R)File 2:INSPEC

(c) 2003 Institution of Electrical Engineers. All rts. reserv.

4674084 INSPEC Abstract Number: B9407-7260-003

Title: Advanced LCD enhancement technology performance for improved display

Author(s): Eichenlaub, J.B.; Wright, J.C.

Author Affiliation: Dimension Technol. Inc., Rochester, NY, USA

Journal: Proceedings of the SPIE - The International Society for Optical Engineering vol.1988 p.242-9

Publication Date: 1993 Country of Publication: USA

CODEN: PSISDG ISSN: 0277-786X

U.S. Copyright Clearance Center Code: 0 8194 1237 6/93/\$6.00

Conference Title: Display Systems

Conference Sponsor: Eur. Opt. Soc; SPIE; Soc. Imaging Sci. & Technol

Conference Date: 23-24 June 1993 Conference Location: Munich, Germany

Language: English

Subfile: B

August 20, 2003

...Abstract: by the author and various useful configurations defined. From this it has been established that **stereoscopic** displays can be obtained without either compromise to display surface resolution or requiring the viewer...

...confirmed that such display constructs may be usefully applied to direct view, projection mode and **helmet** mounted systems to the **net** benefit of operator performance.

...Identifiers: **stereoscopic** displays...

... **helmet** mounted systems

37/3,K/16 (Item 1 from file: 233)

DIALOG(R)File 233:Internet & Personal Comp. Abs.

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00616741 00CG12-002

2000 innovation awards -- 21 products exhibit the true spirit of computer graphics innovation

Computer Graphics World , December 1, 2000 , v23 n12 p28-33, 6 Page(s)

ISSN: 0271-4159

... guide to 21 outstanding CG hardware and software products, chosen by the editors. Notes that **Web** -based graphics programs and CAD/CAM/CAE viewing and collaboration tools have matured to the...

... NA) from Time's Up of Linz, AT, a spherical projection interface in which the **user** literally enters a **virtual world** by stepping inside a three-meter diameter translucent ball; ConCAVE (\$45,000) from Fakespace of Kitchener, Ontario, an office-size visualization display that can be viewed by multiple **users** without the use of special glasses or **head - tracking** devices; and VisionStation (\$19,995) from Elumens of Cary, NC, a nine-foot diameter hemispherical display that envelops single **users** in an immersive desktop environment. Includes 14 screen displays and 8 photos. (KMD)

37/3,K/17 (Item 2 from file: 233)

DIALOG(R)File 233:Internet & Personal Comp. Abs.

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00423694 96PM05-072

3D gets real -- Take your PC into the next dimension with amazing new 3-D products

Ditlea, Steve

PC/Computing , May 1, 1996 , v9 n5 p171-178, 6 Page(s)

ISSN: 0899-1847

... of 3-D graphics programs, 3-D graphics accelerator cards, virtual reality displays such as **helmets** , gloves, and glasses, and 3-D sound systems. A sidebar describes the 3-D available on the **Web** thanks to the adoption of **VRML** as a standard **Web** -publishing format. Another sidebar describes 3-D design programs which allow **users** to walk through or around architectural models. A final sidebar describes 3-D games. Includes...

Descriptors: Three-dimensional Graphics; **Web** Tools; Vendor Guide; Directories; Hardware Review; Software Review

37/3,K/18 (Item 3 from file: 233)

DIALOG(R)File 233:Internet & Personal Comp. Abs.

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00315833 93CG06-002

Kicking the tires of VR software -- With the help of today's new VR software programs, users are building their own VR applications

Brill, Louis M

August 20, 2003

Computer Graphics World , June 1, 1993 , v16 n6 p40-53, 8 Page(s)

ISSN: 0271-4159

Company Name: Sense8; Straylight; VReam; Autodesk; Virtus

Product Name: WorldToolKit; PhotoVR; VRDS; Cyberspace Developer's Kit; Walk-Through

**Kicking the tires of VR software -- With the help of today's new VR software programs, users are building their own VR applications**

Product Name: WorldToolKit; PhotoVR; VRDS; Cyberspace Developer's Kit; Walk-Through

... manufacturers, and a table comparing the products in categories of platform, input devices, support for HMD , rendering card, scripting code, runtime license, user group, quantity currently installed, date of first release, current version and price. Includes seven screen...

Identifiers: WorldToolKit; PhotoVR; VRDS; Cyberspace Developer's Kit; Walk-Through; Sense8; Straylight; VReam; Autodesk; Virtus

37/3,K/19 (Item 1 from file: 6)

DIALOG(R)File 6:NTIS

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2197312 NTIS Accession Number: ADP010617/XAB

**Methods for Improving Depth Perception in HMDS**

Fischer, R. E. ; Reiley, D. J. ; Pope, C. ; Peli, E.

Optics I, Inc., Westlake Village, CA.

Corp. Source Codes: 117829000; 421432

1 Nov 2000 8p

Languages: English Document Type: Conference proceeding

Journal Announcement: USGRDR0116

Presented at the RTO Human Factors and Medicine Panel Workshop, Orlando FL, 5-9 Dec 1997, p9-1/9-8. This article is from ADA388966 The Capability of Virtual Reality to Meet Military Requirements (la Capacite de la realite virtuelle a repondre aux besoins militaires).

Product reproduced from digital image. Order this product from NTIS by: phone at 1-800-553-NTIS (U.S. customers); (703)605-6000 (other countries); fax at (703)605-6900; and email at orders@ntis.gov. NTIS is located at 5285 Port Royal Road, Springfield, VA, 22161, USA.

NTIS Prices: PC A02/MF A01

**Head mounted display** systems typically present imagery to the user focused either at infinity (collimated light into the eyes), or alternatively at some nominal finite...

... of 11-18 feet (diverging light into the eyes). When the imagery presented by an HMD is focused at a finite distance, the right and left eyes are sometimes intentionally set...

... Alternatively, the eyes are often left viewing parallel to one another. In some HMDs the user is permitted to select his or her own preferred focus distance. There appears to be an advantage in improving depth% perception in an HMD simulation environment by altering in real time the focus or apparent object distance to match the distance of the principal object or objects being viewed at that time by the user . An eye tracker may be employed to determine where in the scene the user is looking, and the data is fed back to the computer to perform as appropriate ...

...accommodation and convergence as well as the means for accomplishing the refocusing task in% the HMD viewing optics rapidly, in real time, and without otherwise altering the image quality or magnification. The net goal is to improve the overall realism of the simulation to the user .

Descriptors: Optical equipment; \*Visual perception; \*Helmet mounted displays; \*Head up displays; Simulation ; Optics; Symposia; Environments; Real time; Computers; Display systems; Images; User needs; Focusing; Eye; Range(Distance); Viewers; Magnification; Space perception

August 20, 2003

37/3,K/20 (Item 2 from file: 6)  
DIALOG(R)File 6:NTIS  
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2017188 NTIS Accession Number: AD-A327 007/1

**Basic Fighter Maneuver Visualization Trainer**

(Final rept. Nov 95-Nov 96)

Russo, T. ; Bonilla, V. G. ; Thurman, R. A.

Hughes Training, Inc., Mesa, AZ. Training Operations Div.

Corp. Source Codes: 112371000; 431152

May 97 8p

Languages: English

Journal Announcement: GRAI9722

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located at 5285 Port Royal Road, Springfield, VA, 22161, USA.

NTIS Prices: PC A02/MF A01

...mentally transfer themselves into the actual cockpit environment. This paper describes the development of a **virtual environment** (VE) for teaching student pilots how to perform basic fighter maneuvers. The Basic Fighter Maneuver Visualization Trainer has the capability to display pre-recorded flight paths from Distributed Interactive **Simulation** (DIS)-compliant **simulator** data in a Digital Terrain Elevation Data (DTED) **virtual environment** database. This portable VE system uses commercially available equipment and software for training at the squadron level. HyperText Markup Language (HTML), the language of the **Internet**, is used to create a **user**-friendly, icon-driven, visual interface for program instruction and execution of the virtual flight maneuver demonstrations. The system allows novice pilots to observe, in a **helmet**-mounted display ( **HMD** ), pre-recorded flight maneuvers as performed by experienced pilots before attempting to perform the maneuvers themselves. After demonstrating the learned maneuvers in a DIS-compatible **simulator**, the novice pilot can again review the pre-recorded demonstrations or view their own recordings

...  
Descriptors: Flight training; \*Flight maneuvers; \*Flight **simulation** ; Computer programs; Data bases; Digital systems; Environments; Education; Students; Cockpits; Interfaces; Pilots; Elastic properties; Terrain; Jet fighters; Instructors; Vision; Instructions; Flight simulators; Elevation; Virtual reality; **Helmet** mounted displays; Squad level organizations; Hypertext; Hands; Distributed interactive **simulation**

37/3,K/21 (Item 3 from file: 6)  
DIALOG(R)File 6:NTIS  
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1562055 NTIS Accession Number: AD-A229 037/7

**SuperTroop via I-Port: Distributed Simulation Technology for Combat Development and Training Development**

(Final rept. Oct 89-May 90)

Gorman, P. F.

Institute for Defense Analyses, Alexandria, VA.

Corp. Source Codes: 075311000; 179350

Sponsor: Institute for Defense Analyses, Alexandria, VA.; Shared Bibliographic Input.

Report No.: IDA-P-2374; IDA/HQ-90-35316; SBI-AD-E501 305

Aug 90 78p

Languages: English

Journal Announcement: GRAI9110

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August 20, 2003

email at orders@ntis.fedworld.gov. NTIS is located at 5285 Port Royal Road, Springfield, VA, 22161, USA.

NTIS Prices: PC A05/MF A01

**SuperTroop via I-Port: Distributed Simulation Technology for Combat Development and Training Development**

... body protection against ballistic, chemical, thermal, and directed energy threats. Fielded first would be a **simulation** of the eventual battle dress--termed ST, for SuperTroop--which could give individual combatants a **portal** into Advanced Distributed **Simulation** --called I-Port. I-Port would then be used to explore the requirements for the...

...for the protective and homeostatic subsystems. I-Port would also produce parametric data on the **man** -machine interface essential to proceeding with confidence into hardware design and construction. To test the...

Identifiers: Exoskeleton; \*Human factors engineering; SBI1; Fiscal year 1991; Armor Body Protection; **Helmet** Mounted Display; ADST(Advanced Distributed **Simulation** Technology); ST(SuperTroop); I-Port(Individual **Portal** ); CIG(Computer Image Generators); CATTS(Combined Arms Tactical Training System); SIMNET( **Simulator** Network); Operation JUST CAUSE; M-16 Rifles; C3I(Command Control Communication and Intelligence); NTISDODXA; NTISDODSD

37/3,K/22 (Item 1 from file: 144)

DIALOG(R)File 144:Pascal

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15459281 PASCAL No.: 02-0152533

**Computer-based and web -based applications for night vision goggle training**

**Helmet - and head-mounted displays VI : Orlando FL, 16-17 April 2001**

RUFFNER John W; WOODWARD Kim G

LEWANDOWSKI Ronald J, ed; HAWORTH Loran A, ed; GIROLAMO Henry J, ed; RASH Clarence E, ed

DCS Corporation, 1330 Braddock Place, Alexandria, VA 22314, Egypt

International Society for Optical Engineering, Bellingham WA, United States

Helmet- and head-mounted displays. Conference, 6 (Orlando FL USA)

2001-04-16

Journal: SPIE proceedings series, 2001, 4361 148-158

Language: English

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**Computer-based and web -based applications for night vision goggle training**

**Helmet - and head-mounted displays VI : Orlando FL, 16-17 April 2001**

...suitable training. Results from field experience and accident analyses suggest that problems experienced by NVG **users** can be attributed to a limited understanding of NVG limitations and to perceptual problems. In...

... that NVG .skills are perishable and require frequent practice. Formal training is available to help **users** obtain the required knowledge and skills. However, there often is insufficient opportunity to obtain and practice perceptual skills prior to using NVGs in the operational environment. NVG **users** need early and continued exposure to the night environment across a broad range of visual...

...knowledge and perceptual skills. NVG training has consisted of classroom instruction, hands-on training, and **simulator** training. Advances in computer-based training (CBT) and **web** -based training (WBT) have made these technologies very appealing as additions to the NVG training...

English Descriptors: Scotopic vision; Learning; **Simulator** ; Computer aided

August 20, 2003

instruction; Multimedia

37/3,K/23 (Item 1 from file: 34)  
DIALOG(R)File 34:SciSearch(R) Cited Ref Sci  
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04323862 Genuine Article#: RV801 No. References: 20  
**Title: ARCHITECTURAL ANATOMY**  
Author(s): FEINER SK; WEBSTER AC; KRUEGER TE; MACINTYRE B; KELLER EJ  
Corporate Source: COLUMBIA UNIV,DEPT COMP SCI/NEW YORK//NY/10027; COLUMBIA  
UNIV,SCH ARCHITECTURE/NEW YORK//NY/10027  
Journal: PRESENCE-TELEOPERATORS AND VIRTUAL ENVIRONMENTS, 1995, V4, N3 (SUM  
) , P318-325  
ISSN: 1054-7460  
Language: ENGLISH Document Type: ARTICLE (Abstract Available)

...Abstract: the early stages of three related research projects whose goals are to exploit augmented reality, **virtual worlds** , and artificial intelligence to explore relationships between perceived architectural space and the structural systems that support it. In one project, we use a see-through **head - mounted display** to overlay a graphic representation of a building's structural systems on the **user** 's view of a room within the building. This overlaid **virtual world** shows the outlines of the concrete joists, beams, and columns surrounding the room, as well...

...construction documents, and critical essays-are bound together and made available over the World-Wide **Web** . Finally, we discuss the relationships among all these projects, and their potential applications to teaching...

37/3,K/24 (Item 1 from file: 99)  
DIALOG(R)File 99:Wilson Appl. Sci & Tech Abs  
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1538791 H.W. WILSON RECORD NUMBER: BAST97047887  
**The design benefits of group VR**  
Rowell, Amy;  
Computer Graphics World v. 20 (Feb. '97) p. 21-4+  
DOCUMENT TYPE: Feature Article ISSN: 0271-4159

**The design benefits of group VR**

ABSTRACT: Virtual reality ( **VR** ) is becoming an increasingly significant medium for project design, presentation, and collaboration. **Virtual worlds** that extend beyond the single- **user head - mounted display** are allowing groups to view virtual 3-D models and to communicate with one another. The different technologies for group **VR** , such as **VR** theaters and shared virtual space via the **Internet** , are discussed, as are the potential applications of the technology.